Improving the Implementation of Enhanced Recovery Pathways through Realist Evaluation

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Abstract

Aim: This doctoral research aimed to develop a better understanding of the process of implementing Enhanced Recovery Pathways (ERPs) in real-world settings. Through a realist evaluation approach, I aimed to identify which implementation strategies worked, to what extent, for whom, under what circumstances, and why.

Background: ERPs are an increasingly popular, evidence-based approach to streamlining a broad range of surgeries. When successfully implemented, ERPs have demonstrated an improvement in patient outcomes, including reduced length of stay, reduced pain and improved recovery. However, implementation and staff adherence to ERPs remains inconsistent, limiting the potential benefits of ERPs in practice.

Methodology: I conducted a realist synthesis of existing UK literature related to ERP implementation research. Building on these findings, I designed a qualitative investigation of a new ERP being introduced in three UK hospitals. This empirical study, conducted over the twelve-month implementation period, involved repeat-interviewing of the co-ordinating change agents, and secondary analysis of ethnographic data. I analysed the entire dataset using thematic analysis.

Findings: My realist synthesis of ERP implementation literature identified the most commonly used strategies for ERP implementation in UK NHS hospitals, but also highlighted the lack of detailed reporting regarding selection and design of these strategies. My subsequent empirical research tested and refined these programme theories further, identifying a number of critical factors which mediate the successful implementation of ERPs. These included: change agent understanding of role and responsibilities, ward staff readiness to change, and contextual sensitivity of implementation strategy design.

Conclusions: Although no single, general implementation strategy can be applied to ensure successful ERP implementation across all contexts, the programme theories developed through this research highlight important areas for attention when designing ERP implementation design strategies. Future ERP implementation efforts should prioritise contextually sensitive, evidence-based implementation strategies, in order to maximise pathway adherence and optimise patient care.

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List of Abbreviations Used

BMJ	British Medical Journal
CG	Clinical Guideline
CMO	Context-Mechanism-Outcome
ERP	Enhanced Recovery Pathway
IPA	Interpretative Phenomenological Analysis
NHS	National Health Service
NICE	National Institute for Health and Clinical Excellence
NIHR	National Institute of Healthcare Research
NMC	Nursing & Midwifery Council
PERFECTED	Peri-operative Enhanced Recovery Hip Fracture Care for Patients with Dementia
PERFECT-ER	PERFECTED ERP
PI	Principal Investigator
PPL	PERFECTED Programme Lead
PwD	People with Dementia
QS	Quality Standard
REC	Research Ethics Committee
SIL	Service Improvement Lead
UEA	University of East Anglia
UK	United Kingdom
WP	Work Package

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Prologue & Thesis Outline

This thesis details the process of implementing an Enhanced Recovery Pathway (ERP) at three UK hospitals, explored predominantly from the perspective of Service Improvement Leads (SILs). Through a realist synthesis of existing ERP implementation literature and an original, in-depth qualitative examination of the implementation of a new ERP in three UK hospitals, this research aimed to aid growing understanding of how best to introduce these complex interventions into equally complex settings.

This **Prologue** chapter aims in the first instance to give a brief overview of the structure of the main body of the thesis, but also serves to explain my reasons for adopting the structure and format I did. I give an outline of my personal and professional background, and my motivations for conducting this research.

Chapter 1 provides a formal introduction to the subject of the thesis. This includes background information about ERPs, highlighting the existing issues with pathway adherence, an explanation as to why theoretically driven implementation strategies are imperative for ERP success, and describe the context in which my empirical research is situated. Finally, I state my research aims, providing specific questions, and an explanation and rationale for my adoption of realist evaluation in addressing these.

Chapter 2 is my review of the existing UK ERP implementation literature, in the form of a realist synthesis. This chapter serves not only to consolidate existing research into ERP implementation in the UK, and guide the design of my main study, but also to highlight the limitations of the existing literature in this area.

Chapter 3 provides a thorough description of how I designed my empirical study in order to address my research questions. This includes a thorough description of my conceptual framework, the epistemological and ontological assumptions underlying my research, an explanation of how and why I designed the study in the way that I did, and how I intended to insure research quality throughout.

Chapter 4 describes my empirical study, a qualitative investigation of the process of implementing a new ERP at three UK hospitals. This chapter addresses my overall research aims, by providing a rich description of the implementation process from the perspective of those coordinating it.

Chapter 5 is a full discussion of the main findings from my empirical study. I discuss these findings with relation to existing implementation and organisational change theory, and the programme theories developed in **Chapter 2**.

Chapter 6 draws the previous chapters together to provide my overall conclusions from this research process. I summarise the main findings from the research overall, and suggest how this contributes to the broader body of literature. I address the strengths and limitations of my research, and what implications or recommendations can be taken from the main findings.

I am a PhD student at the Norwich Medical School, University of East Anglia (UEA). I have undergraduate degrees in Philosophy and Psychology, and a Masters degree in Health Psychology. I have previous research experience using a variety of qualitative approaches, and working with healthcare staff from a broad range of disciplines. I also have clinical experience working as a healthcare professional, predominantly in community care, with elderly populations (including frail patients and patients with dementia). This PhD research came out of an advertised studentship. I was drawn to it partly for pragmatic reasons (as it was fully funded and relatively close to my home) but primarily through my interest in the project itself. As it was to be conducted within the context of a larger, established research project (Peri-operative Enhanced Recovery Hip Fracture Care for Patients with Dementia - PERFECTED), it offered me an opportunity to be a significant part of a meaningful healthcare improvement initiative.

When applying for the studentship, the project was unformed. The project was advertised with the working title of "Supporting acute hospital care for people with dementia through better training transfer". Following a telephone conversation with the project's primary supervisor, Dr Chris Fox, I decided that my experience of healthcare and knowledge of health psychology (particularly behaviour change) would put me in a strong position to make a meaningful contribution in this area of research. At this stage, my understanding of "training transfer" was virtually non-existent, and ahead of my subsequent application and eventual interview with the project supervisors, I did background research around this concept and formulated ideas for the form my research could take. For my formal interview for the studentship (in February 2015), I discussed these research design ideas with the panel (consisting of two members of my current supervisory team, and the Associate Dean for Postgraduate Research), proposing a twelve-month, qualitative investigation of transfer of training within the healthcare setting. The interview gave me an early opportunity to discuss the aims of the PERFECTED project with its chief investigator, and explore potential opportunities for data collection and investigation that I hadn't previously considered.

After the interview, there was a very quick turnaround between receiving a formal offer of the studentship, and commencing my PhD in April 2015. When my PhD began, I felt under intense pressure to "hit the ground running": I was acutely aware that the project which my research was aligned with had a set timeline, and this would and could not be delayed to accommodate me. I

arranged to meet with the PERFECTED Principal Investigator (PI) at the UEA in order to gain a better understanding of PERFECTED itself. I was conscious that the PERFECTED research team were very busy themselves and was grateful for their advice and guidance. The PERFECTED PI provided me with PERFECTED documentation, including the Work Package 2 (WP2) protocol and a GANTT outlining key dates and activities that the research team would be undertaking. From here, I was able to create a rough plan of my intended activities over the course of my PhD.

My first challenge was getting to grips with my intended subject of study. I had limited understanding of ERPs and training transfer, but the time I had available was limited: PERFECTED WP2 was scheduled to begin towards the end of September 2015 (less than six months into my PhD), and in order to capture the process of training transfer within the context of the PERFECTED research project, I had to design my research proposal and have this ethically approved by this point. My initial ethics proposal was rejected (a full account of my experiences of obtaining ethical approval are given in section **3.3.7**), and although I was initially frustrated by this delay, during this time I had an opportunity to discuss my research aims further with the PERFECTED research team, and made the pragmatic decision to change my focus from "training transfer" to the broader process of implementation. Since the start of my PhD, I had gained a better understanding of the PERFECTED programme, and I decided that since the process with which my own research was aligned didn't involve a formal, structured training programme, a study of training transfer was not appropriate. To re-design my research with this new focus meant a re-appraisal of literature specifically related to ERP implementation, which was labour intensive but an important stage in my conceptual and theoretical understanding, informing the appropriate design of my research.

I kept a variety of disparate notes throughout my research process: although I began with all the best intentions to keep thorough and consistent observations and reflective notes at every stage of the project, my own distractible attention and the unpredictability of everyday life meant that my note-taking was at best a confused collage. When writing this thesis up in my final year, I found that the notes I needed were all there, available and useful, but I spent considerable time gathering them together from various notebooks and word documents, and arranging them into a usable chronology. In retrospect, a more disciplined approach and a better filing system would have saved me a lot of time and trouble. However, as my project changed and developed, the types of notes and the way in which I organised these also necessarily changed, and predicting ahead of time what would have been the most appropriate way to record or categorise my notes in advance was virtually impossible. The fact that I regularly kept notes about my ongoing project development (including critical reflection on this process) in a predominantly digital format helped me to locate and navigate relevant notes when I needed them.

Towards the end of the second year of my research, I encountered a number of "outside context problems" (including the dissolution of my parents' 40-year marriage, and the traumatic death of my father-in-law to motor neurone disease), and progress on my thesis stalled. It would have been impossible to plan for these events, and impossible to predict how sourly they would affect me both in terms of my mental well-being and my commitment to the research process. At this stage, I seriously considered taking a formal break from my research (and my supervisory team were supportive of this, if I felt this was what I needed to do), however I ultimately decided to continue with my research as planned, not only because my continued progress in my research gave me a purposeful activity to focus on during this challenging time, but also because I felt a protracted break from the project would have a detrimental effect on my immersion in and engagement with the data. In retrospect, this decision has had challenging results, as I struggled to manage the pressures of both my professional and personal life. However, this added pressure also spurred me into making challenging decisions about how I could address my research questions and address my overall aims, given the time and resources available to me.

I have chosen to present this thesis following a loosely narrative structure, reporting predominantly in the first person. Although this is not a format I am used to writing in, once I had finished transcribing and analysing the SILs' interviews, I felt that presenting their experiences in the traditional, passive voice (which I am more accustomed to) would be unsuitable. The stories which the SILs shared with me were very personal experiences, detailing their doubts, struggles and frustrations, as much as their triumphs and successes. My decision to structure my work in this way came after I had begun the process of writing up my results from my empirical study (**Chapter 4**): the stories which I was presenting were honest insights into the experiences of three people with whom I had spent twelve months (Rhodes, 1996), and they had such personal resonance that the prospect of presenting these findings in the traditional, passive voice (which I had been used to using throughout my academic career so far) felt as though I would be doing my participants a disservice.

Added to this, my own personal reflections on the research process provide important insights into my decision making and analytic processes, and trying to write these in the third person felt clumsy and dishonest. Ultimately, I viewed the whole research process as part of an ongoing narrative, and writing up my research in a traditional, third person voice would decontextualise my research process and the resulting findings, as it runs contrary to the understanding that qualitative research is a fundamentally interpretative process (Webb, 1992). By providing a comprehensive, detailed description of the whole research process, given from my perspective as the researcher, I aimed to guide the reader's understanding as to how and why I reached the resulting conclusions. During the research process, I also felt a strong sense of empathy with the SILs, as they expressed feelings of

uncertainty, self-doubt, and frustration with the research process, feelings which I also experienced during my PhD journey. In the interests of transparency and rigour (Hadi and José Closs, 2015), alongside the main SIL narrative I have included my own reflections on the research process, giving insights into my personal context and decision making.

Chapter 1 - Introduction

This chapter will outline the context of my research, giving an overview of Enhanced Recovery Pathways (ERPs) generally, a brief introduction to the ERP developed for PERFECTED (alongside which my own research was aligned), and then exploring the issue of ERP implementation. I will then explore the concept of "realist evaluation" in the context of process implementation, and why I decided to adopt this framework for my research. The chapter will conclude with the overall aims of this thesis, my stated research questions, a rationale for why this research is timely and appropriate, and how these questions will ultimately be answered.

1.1 Enhanced Recovery Pathways

ERPs, also known as Enhanced Recovery After Surgery, were formally developed by a group of surgeons and academics in London in 2001 (Ljungqvist, 2014). The design of ERPs was an evolution of a multimodal approach pioneered in Denmark in the late 1990's (Kehlet, 1997), then known as "fast-track surgery". After reviewing the literature related to improving surgical outcomes, Kehlet and his colleagues were able to streamline the process of colorectal surgery, resulting in a reduction in a patient's hospital stay from 9-10 days to only two days. The original study group felt that the term "fast-track" put too strong a focus on reducing length of hospital stay, and wanted instead for the focus to be on an overall improvement in patient care and experience of surgery, hence the term "Enhanced Recovery" was adopted. ERPs are more than the introduction of new ways of working: they signify an important shift in care culture, aiming to consolidate all stages of a patient's surgical journey, in a way that ensures continuity and joined-up, multidisciplinary working.

Since then, ERPs have been adopted across a range of types of surgery in Europe and the United States. ERPs are an evidence-based, proactive approach designed to address the entirety of the surgical pathway, from pre-admission through to discharge and recovery. They were originally developed to improve patient outcomes and experience of major colorectal surgeries, but have subsequently been developed for gynaecological, urological, orthopaedic surgeries, and many more besides. When successfully integrated into hospital practice, ERPs have been shown to reduce length of patient hospital stay, improve functional outcomes, reduce pain and post-surgical complications, and reduce patient readmission rates (Rawlinson *et al.*, 2011; Paton *et al.*, 2014). Since the introduction of evidence-based ERPs, surgical interventions have seen a reduction in length of patient stay by on average 2.5 days, and a reduction in complication rate across a range of surgeries (Zhuang *et al.*, 2013; Visioni *et al.*, 2017). Although the structure of ERPs varies, they typically consist of twenty different items (Ljungqvist, 2014), dependent on the surgical procedure of focus. Common ERP items often include, but are not limited to, reduced fasting times, reduction in use of long-acting

sedatives and opioids, early intake of fluids and food (once the patient is lucid following surgery) and early mobilisation.

ERPs have increased in popularity in the UK National Health Service (NHS) since their adoption in the early 2000s, and have been an effective means of streamlining surgical procedures, reducing costs, reducing patient readmission rates and ultimately improving patient care and functional outcomes. This is particularly important as the NHS experiences increasing pressure to reduce costs whilst serving an increasing population (Iacobucci, 2017; Robertson *et al.*, 2017). A growing number of hospitals have ERPs in place for a range of surgeries, including cancer-related procedures such as mastectomy, hysterectomy and colorectal surgery. The use of ERPs to improve patient outcomes following hip surgery is on the rise (a Malviya *et al.*, 2011; Dwyer *et al.*, 2012; Sun, Bailey and Pearce, 2014), but these are still rare when compared with other surgical procedures.

Approximately 70-75,000 people fracture their hip every year, at a cost of £2 billion in health and social care (NICE, 2011). Hip fracture occurs predominantly in older patients, and the majority of hip fracture patients require hip surgery (Patel *et al.*, 2013). As life-expectancy rises and the general population continues to increase in age, the incidence of hip fracture necessitating surgery will continue to rise (NICE, 2011; Odén *et al.*, 2015). Hip fracture surgery remains the most common surgical intervention in the older population (Lenze *et al.*, 2007) and as such, is a key area of focus for research and optimising care. The use of ERPs in hip fracture surgery is increasing, and research demonstrates their use reduces incidence of post-surgical complications and mortality (A. Malviya *et al.*, 2011). However, the current design of ERPs may not adequately meet the needs of all patients, or staff. Existing research into the use of ERPs for hip fracture tends to favour the “healthy patient” (i.e. a normative patient, with no co-morbidities). Although this is common practice in healthcare research in an effort to minimise the effect of these variables on subsequent outcomes, it means that current guidelines may not be the most appropriate for all patients. In hip fracture, which predominantly affects older, more frail patients, this has significant consequences. Approximately 10% of patients die within the first month following their fracture, and a third within the first year, but the cause of death is usually associated with global ill-health rather than directly due to the fracture itself (NICE, 2011). Approximately two in five of all hip fracture patients have comorbid cognitive impairment, with half of these meeting the diagnostic criteria for dementia (Seitz *et al.*, 2011); hip fracture is the main reason for hospital admission for patients with dementia (PwD). The risk of hip fracture is greater in patients with cognitive impairment, such as dementia (Connelly and Biant, 2012) and the rate of surgical complications and post-surgical mortality are higher for this group.

A recent systematic review of hip fracture literature (Smith *et al.*, 2015) highlights that no existing care pathway has been specifically designed to meet the needs of hip fracture PwD. This patient group experiences higher rates of post-surgical complications such as an increased risk of delirium, poor functional outcomes and a markedly high rate of 30-day mortality (Menzies *et al.*, 2010). Given the high prevalence of hip fracture necessitating surgery comorbid with cognitive impairment, and the specific health and social care needs for these patients, the development and trial of an ERP designed specifically to meet this increasing need was timely. In order to address this, a five-year research programme, titled "Peri-operative Enhanced Recovery hip FracturE Care of paTiEnts with Dementia" (PERFECTED) was established.

1.2 The PERFECTED Project

My research was conducted within the context of PERFECTED, which was a five-year, £2m National Institute of Healthcare Research (NIHR) funded applied research programme, based at the University of East Anglia (UEA). PERFECTED aimed to develop and trial a new ERP specifically to meet the needs of hip fracture patients with dementia. The PERFECTED research team observed that although approximately a quarter of acute hospital beds are occupied by PwD, interventions designed specifically to address their care in hospital remains limited.

In order to address this, the PERFECTED research programme developed and trialled a new evidence-based ERP to improve the surgical pathway and subsequent outcomes for patients with dementia who break their hip. The research programme consisted of four main Work Packages (WPs). **WP1** established the best current practice for hip fracture PwDs, through a process of systematic review, survey, ward observations, interviews and focus groups, and expert consultation. From this process, the initial ERP was developed, known as PERFECT-ER. **WP2** (alongside which my own research was aligned) was a twelve-month process in which the initial draft of PERFECT-ER was trialled in three UK hospitals. This WP involved the appointment of change agents (known as Service Improvement Leads, or SILs), who worked directly within their wards, coordinating ERP implementation, assessing pathway adherence and providing feedback to the research team in order to make necessary developments to PERFECT-ER. WP2 aimed to ascertain how PERFECT-ER operated in a real-life setting, and how best to implement it into practice. The process of implementation was my primary focus.

Although **WP3** and **WP4** were beyond the scope of my research, I did share some early findings from my research with the PERFECTED research team, in order to help shape the implementation process for these WPs. **WP3** was the main pilot of the final, developed PERFECT-ER, and involved a cluster randomised controlled trial across ten UK hospitals, comparing the use of PERFECT-ER to care as

usual. **WP4** was a consolidation of the findings across the WPs, a consensus conference, and a dissemination of the findings from the research programme as a whole.

1.3 Process Implementation

A key question for **WP2** in PERFECTED, was to ascertain how best to implement the developed ERP into hospital practice. Exploring and providing a rich description of the PERFECT-ER implementation process became the central aim of my own research. In order to realise the maximal benefits of an evidence-based pathway, it must be fully integrated into clinical practice, and adhered to fully by all members of staff, but simply introducing the pathway (and even making it mandatory practice) is not enough to ensure adherence (Newman, Papadopoulos and Sigsworth, 1998; Rousseau and Gunia, 2016). Hospital wards are busy, complex environments, which employ large numbers of staff from disparate backgrounds and varying priorities. Introducing any new intervention poses a number of challenges, as staff adjust their established behaviours to meet new requirements. However, with a complex intervention such as an ERP, which requires the co-ordination of all staff groups across the surgical pathway (from domestic staff, e.g. cleaning staff, through to anaesthetists), these challenges are complicated further.

Although the evidence supporting the use of ERPs is continually growing, and despite careful consideration given to the design of ERPs, there is a known issue with pathway adherence (Maessen *et al.*, 2007; Adamina *et al.*, 2011). If the recommended practices are not adhered to, the resulting desired outcomes cannot be achieved (Pedziwiatr *et al.*, 2015). If an ERP is improperly or only partially implemented in practice, the full benefits of this approach is unlikely to be realised. A recurring problem in newly introduced ERPs is poor adherence, particularly in post-operative/recovery stage of the pathway. Certain elements common to most ERPs, such as encouraging early mobilisation, often suffer low adherence by staff, with staff tending to return to more familiar methods of working (Ahmed *et al.*, 2010; Lee *et al.*, 2011). Although a number of reasons for this issue have been suggested (staff attitudes, motivation to change, lack of appropriate resources), these are speculative and an in-depth investigation of the mechanisms and barriers to ERP adherence has as yet not been conducted.

Compared to the initial ERP design, less importance is afforded to the process of its implementation (McCormack *et al.*, 2013), and as a result, ERPs are often not fully integrated into everyday ward practice. It is unclear in which contexts individual factors aiding or obstructing implementation become relevant, although a wide variety of barriers and aids to implementation have been suggested (Kahokehr *et al.*, 2009; Lyon, Solomon and Harrison, 2014). The effectiveness of an ERP is limited by the success of its implementation: unless the pathway is adhered to, it cannot achieve the

aims it is designed to address. As they address all aspects of the surgical pathway, from admission through to discharge and recovery, ERPs invariably involve a broad range of staff groups from varying disciplines and backgrounds. This makes the process of implementing an ERP challenging.

Introducing a complex intervention into a complex setting requires significant changes to existing, embedded practices among staff, and initially, the burden this places on staff may outweigh perceived long-term benefits (Kahokehr *et al.*, 2009; Jess and Taylor, 2014; Gotlib Conn *et al.*, 2015). Similar barriers to successful implementation have been observed in the introduction of surgical checklist: although initial reviews of these checklists in practice showed them to be effective in significantly reducing the rate of patient mortality and post-surgical complications (Borchard *et al.*, 2012), not all hospitals which introduced similar checklist observed the same improvements. Qualitative investigations into the introduction of surgical checklists subsequently revealed that the checklists were not always fully implemented in practice (Russ *et al.*, 2015): the method of checklist implementation varied broadly between sites, and the required changes often encountered resistance by senior clinicians. These findings demonstrate that regardless of the robustness of an intervention design, without appropriate implementation, the aims of the intervention cannot be fully realised. Although an intervention may be effective in practice, it can only be so if it is introduced strategically in such a way that promotes intervention adherence (Conley *et al.*, 2011). ERPs share similar aims and challenges to surgical checklists, with the added complexity of addressing pre-admission and post-discharge elements of the patient's surgical journey, thus involving a broader range of staff, and the subsequent management of complex multidisciplinary working relationships (Maessen *et al.*, 2007). Although the lessons learnt from the implementation of surgical checklists can help to inform ERP implementation, this area deserves further research attention to address these specific challenges.

Current understanding of how best to introduce a new ERP into complex hospital environments, in a way that is both effective and sustainable, is limited. Even where ERPs have been successfully introduced, it is unclear which elements of implementation strategy have been effective in which settings, and what are the key contextual differences that policymakers should be aware of (what works, for whom, under which circumstances, to what extent (Pawson *et al.*, 2004)). In order to design an appropriate implementation strategy, policymakers and clinicians need to have a good understanding of the current, local state of practice, the day-to-day working of the ward, and the complex network of relationships between staff groups. Available resources must also be realistically appraised.

Anticipating challenges to ERP implementation, PERFECTED WP2 was designed to collect detailed data regarding the implementation process. By focussing on the process of ERP implementation, my own research project aimed to identify the main mechanisms of implementation, and the contexts in which they operate in order to produce desired outcomes (i.e. maximising ERP adherence).

> *"Implementation is worth studying precisely because it is a struggle over the realisation of ideas. It is the analytical equivalent of original sin; there is no escape from implementation and its attendant responsibilities. What has policy wrought? Having tasted of the fruit of the tree of knowledge, the implementer can only answer, and with conviction, it depends…"* (Pressman and Wildavsky, 1984)

A new initiative is only as good as its implementation: without an appropriate implementation strategy, the introduction and adoption of new policies and procedures can be unpredictable at best, and at worst, fail to have any impact at all (Van Der Helm, Goossens and Bossuyt, 2006). Without effective implementation, the impacts of a proposed new initiative cannot be fully realised, no matter how carefully constructed and evidence-based that initiative may be.

What constitutes an "appropriate implementation strategy" will vary depending on the local context of where the initiative is being introduced. A large trauma unit in central London and a district general hospital in Devon may both be NHS hospitals and subject to the same national guidelines and policies, but they face unique and distinct local challenges (including but not limited to: current practices in place, patient demographics, staffing levels, localised budgets and funding, access, and geographic distance covered). These must all be taken into account when designing not only the initiatives themselves, but the way they are implemented in order to ensure successful uptake. What might work in a busy, urban setting such as London, might be completely unfeasible in a rural county such as Devon. Conversely, certain changes which may be straightforward in Devon, may pose significant challenges back in London. Densely populated urban settings such as London may have access to more resources, including specialist services and a broader range of staff with specialist skills and experience. However, these settings also serve a much higher patient population, putting higher demands on staff. Although rural settings like Devon may have access to fewer resources, the patient to staff ratio is also smaller, which has implications for time staff are able to devote to re-enablement activities, for example. The importance of considering local context when implementing healthcare interventions has been highlighted across a broad range of disciplines (Shortell *et al.*, 1995; Hawe *et al.*, 2004; Edwards and Barker, 2014). The assumption that a standardised initiative can be introduced at a number of contextually distinct locations and expect the same outcomes is a

dangerous fallacy, with potential resulting frustration, wasted time and resources, and a negative impact on staff and patients alike.

With this in mind, I argue that any new organisational process needs to plan its implementation strategy as carefully as it does the process proposed. This is not a ground-breaking concept, and has received much research attention in business and management research (Pressman and Wildavsky, 1984), establishing widely applied theories of transfer of training and organisational change management (Baldwin and Ford, 1988; Todnem By, 2005; Blume *et al.*, 2010). These existing theories are relevant and may be transferable to the healthcare context as a multidisciplinary working environment, and implementation research and healthcare professional behaviour change have increased in prominence in recent years (McCracken and Gutiérrez-Martínez, 2011; Michie, van Stralen and West, 2011; Chater and Hughes, 2012). Although implementation science is gaining ground in healthcare research (e.g. Implementation Science journal established in 2006, specific implementation tracks at recent health psychology conferences, and increased funding into implementation research), clinicians and key decision makers at the frontline of healthcare practice all too often give emerging implementation research secondary importance when designing new healthcare interventions (Greenhalgh *et al.*, 2014; Bauer *et al.*, 2015). This can have significant implications for the uptake of new healthcare interventions, as policies and procedures which are not strategically implemented into practice can suffer slow uptake by staff, and struggle to achieve long-term sustainability.

Evidence-based healthcare is at the forefront of consciousness for clinicians and policy-makers alike (Heneghan and Godlee, 2013), and internationally there is a drive to continue to adapt and improve healthcare practice in light of the best available healthcare research (Youngblut and Brooten, 2001; Frewin, 2005). Unfortunately, this focus on being informed by evidence does not extend to the same degree to the implementation of new interventions and policy (McCormack *et al.*, 2013). Too many initiatives are introduced without a strategic, evidence-based plan of implementation, relying instead on staff to simply adhere to the new processes as prescribed, and subsequently, policymakers encounter issues when, for whatever reason, the initiative fails to be integrated with daily practice. It is rarely as straightforward as “dropping in” a new initiative: hospitals are complex environments, employing staff from a broad range of disciplines and varieties of experience (Rousseau and Gunia, 2016). Staff may have preferred, established ways of working, misunderstand or disagree with the newly introduced way of working, the required changes may upset existing interdisciplinary working relationships, or may be prohibited owing to local organisational structure, resource restrictions or physical environment. ERPs in particular, being multimodal pathways that affect many aspects of patient care, require careful, contextually-sensitive implementation planning

(McCormack *et al.*, 2013): all staff members affected by the necessary changes to practice must be "pulling in the same direction" in order to implement the ERP successfully. Policymakers must be aware of national, cultural and local barriers to successful implementation, in order to design realistic strategies for managing these challenges.

Although still an emerging area of research in healthcare, evidence for implementation strategies is growing, and there is an onus on decision makers to utilise this evidence to develop appropriate plans for translating policy into practice. Implementation research related directly to ERP introduction is limited, but transferable concepts from other areas of healthcare, particularly other complex interventions, but also behaviour and organisational change theory more generally (such as business and management, as briefly mentioned above), can be utilised to inform implementation strategy in this area. Working alongside PERFECTED WP2 provided me with the opportunity to explore the process of ERP implementation "in real time", working directly with the staff tasked with coordinating the change process. Collecting empirical, qualitative data throughout the implementation process would allow for insight into the relevant challenges particular to introducing ERPs, and a real-world understanding of how hospital staff conceptualise and manage these challenges within their own particular ward context.

1.4 Realist Evaluation

There is a growing body of evidence supporting the use of ERPs as a means of improving surgical outcomes: that ERPs "work" is not under question within the context of this thesis. Instead, I aimed to explore was "what works, for whom, how, and under what circumstances". Given the complexity of introducing a multimodal pathway into a busy, working hospital setting, I decided to adopt a realist evaluation approach to my research. Realist evaluation, as first developed by Pawson and Tilley (1997), investigates the extent to which interventions work in specific contexts, by exploring the way in which actors and stakeholders respond to the intervention in their particular setting (Pawson and Tilley, 1997). Realist philosophy, in this context, argues that the success of any given intervention relies in large part on the specific way that stakeholders interact with the intervention in their particular situation. Different actors, under a different set of circumstances, with differing beliefs, attitudes, and networks of relationships with their colleagues, will react in different ways to the same intervention or policy. These social, psychological and cultural drivers are referred to as "generative mechanisms" in realist evaluation, and these mechanisms affect actors' reasoning and subsequent actions in response to a new intervention. Realist evaluation focuses primarily on the importance of context when introducing new interventions, and supporters argue that generative mechanisms will only occur under certain, specific circumstances. This is not to say that a particular

intervention can only work under one specific set of circumstances, as there may be more than one way that the intervention is able to be enacted across various different settings.

Given this, I concluded that adopting a realist evaluation approach would be particularly well suited to address my research aims: different ERPs have been designed for various different surgical procedures, and are introduced in different hospitals with differing available resources, to be enacted by complex, multidisciplinary networks of staff groups with different levels of skill and experience. When studying interventions in real-world settings, researchers are not always able to control the intervention or the context in which it is introduced, and adopting traditional, experimental methods of investigation is inappropriate (Pawson, 2013). Realist evaluation is essentially "method neutral", in that it can be undertaken using any number or combination of research methods. This flexibility means that an evaluator or researcher can investigate the intervention of study in a meaningful way, regardless of the methods of investigation available or possible. Realist evaluation also focuses predominantly on intra-programme comparison, comparing different groups or sites enacting the same intervention, generating and testing new programme theories for how the intervention, stakeholders, and environment interact. For these reasons, I decided that adopting this approach would be both practical and appropriate. Informed by realist evaluation, my research combines a realist synthesis of existing literature, and an empirical study using qualitative research methods, to investigate the phenomenon of study. Using realist synthesis, I consolidate existing ERP implementation literature to construct programme theories to explain demi-regularities in ERP implementation, and identify gaps in current conceptual understanding. I then test and further refine these theories through an exploratory, qualitative study of the implementation of a new ERP in three UK hospitals.

1.5 Objectives & Research Questions

The uptake of ERPs in surgery is rising. However, as in many areas of healthcare, the problem of successful policy implementation remains a real issue. Successful implementation, particularly with complex, multimodal organisational changes such as ERPs, requires careful strategic planning, with sensitivity to local context. Without appropriate implementation strategy, pathway adherence suffers and as a result, the positive effects of evidence-based healthcare fail to be fully actualised.

With this issue in mind, this research aimed to:

- Further the current understanding of the process of ERP implementation in the UK
- Consolidate existing UK ERP implementation literature, identifying the most commonly used implementation strategies, and the contexts in which they work

- Provide a rich description of the implementation process of a new ERP in three hospitals in the UK, identifying the key barriers and facilitators to change
- Develop current understanding of how different local hospital contexts impact the introduction of a new ERP
- Explore the challenges faced by staff coordinating ERP implementation, and the various ways in which they experience and manage these challenges

From these broad aims, I developed four key research questions which my research aimed to answer. These were:

1. What are the main barriers and facilitators to ERP implementation?
2. How do change agents promote pathway adherence by staff?
3. What are the key skills necessary to fulfil the role of a change agent?
4. How do change agents negotiate the complex network of multidisciplinary staff relationships in order to achieve implementation success?

The central aim of this research was to explore the issue of successful implementation of ERPs in the UK, with a special focus on the impact of local context on the process of implementation. To achieve my research aims, I first reviewed existing UK literature describing ERP implementation (**Chapter 2**), through a process of realist synthesis. This review served to provide a detailed picture of current implementation strategies used when introducing new ERPs in UK hospitals, and to what extent these strategies worked, for whom, in what circumstances, and how. This review also served to highlight the gap in the literature regarding ERP implementation: studies which actually reported the implementation process were few, and the detail given was limited at best. Although the design of the ERP itself was clearly evidence-based, it was unclear how the implementation strategies used were decided upon, leaving me to query whether or not evidence-based implementation planning received the attention required for success.

I then used the findings from this review to inform the design of my empirical study, which followed the implementation of a new ERP for hip fracture patients with dementia, trialled in three UK hospitals (**Chapters 3 and 4**). Working closely with Service Improvement Leads (SILs), who were employed as the main change agents and co-researchers tasked with coordinating and overseeing the implementation of the ERP, I was able to gain a unique insight into the challenges faced by staff when introducing the ERP at their hospitals, and the different ways in which they overcame these challenges. From this research, two key programme theories were developed, tested and refined, to guide future ERP implementation efforts.

Chapter 2 – Literature review with realist synthesis

At the start of my PhD journey, my knowledge of ERPs and their implementation was limited. In order to guide the design of my empirical study, I undertook a thorough review of existing ERP implementation literature conducted in the UK. I chose to restrict this particular review to the UK partly as, during my preliminary searches of the literature, I noticed a lack of coherent and detailed ERP implementation research nationally, which I hypothesised had affected the impact of ERP introduction being maximised in the UK. Also, as the National Health Service (NHS) comes under stricter staffing and budget cuts, I strongly felt that there were specific contextual issues relating to the UK experience of policy change affecting a broad range of healthcare staff, such as in the introduction of ERPs. By focusing solely on UK literature, I aimed to gain specific insight into the way that ERPs are implemented in this national context. ERPs are complex interventions which impact a complex, multidisciplinary network of staff working in a complex setting. As such, there are already numerous mediating factors which would undoubtedly influence the implementation process, even by narrowing the focus to national literature. While I did appreciate that many concepts from international literature are transferrable, I felt this review, in this form, for this specific area of research, was a necessary first step in consolidating an overview picture of specific, national research. Findings from this review would help to develop my understanding of how ERPs are currently implemented in different UK hospitals, and inform the design of my empirical study.

For the purposes of this review, I decided to adopt a realist synthesis approach (I give a full rationale for this approach in section **2.2**). Although I had conducted systematic reviews as part of my undergraduate studies, I had no previous experience of realist evaluation, realist synthesis or "scientific realism" (as defined by Pawson and Tilley (1997)). The prospect of conducting a review of a disparate body of research, using an unfamiliar method, was daunting. In order to support this process, I consulted widely available literature and guidelines detailing common approaches to conducting realist syntheses (particularly the works of Pawson, Tilley and colleagues (Pawson *et al.*, 2004, 2005; Wong, Greenhalgh, *et al.*, 2013)) and thoroughly appraised existing, peer-reviewed realist syntheses published in academic journals (Rycroft-Malone *et al.*, 2012, 2014; J. Greenhalgh *et al.*, 2014; Gillespie and Marshall, 2015). I also joined a JISCMail group established by the RAMESES project (Realist And Meta-narrative Evidence Syntheses: Evolving Standards (Greenhalgh *et al.*, 2013)), which not only provided me with a forum of experts and peers with which I could discuss ideas and issues, but also gave me a better insight into the realist approach to process evaluation more generally. Throughout the process of conducting my review, I met regularly with my supervisory team to discuss its ongoing development, which helped me to critically appraise my decision making, ensuring rigour and transparent reporting. During the process of writing up my

thesis, I presented my preliminary findings at the European Health Psychology conference (Coxon, Nielsen, *et al.*, 2016), and a version of this literature review was accepted for publication in the journal *Hospital Practice* (Coxon, Nielsen, *et al.*, 2017) (see Appendix 1).

2.1 Introduction

As described in **Chapter 1**, ERPs are an evidence-based, proactive approach to improving patient surgical outcomes. ERPs have been designed for specific surgeries, including orthopaedic, colorectal, urological and gynaecological surgery. Although the design of an ERP varies depending on the type of surgery and target patient group, the overall aim is the same: to expedite patient recovery and improve functional outcomes, through a series of interconnected, evidence-based practices. Common ERP elements include reduced fasting times prior to surgery, minimal access techniques during surgery, and early mobilisation after surgery (Crawford *et al.*, 2013). They have increased in popularity in the UK NHS since the early 2000s in an effort to optimise patient care, reduce recovery times and reduce costs (Fitzgerald, 2012; Paton *et al.*, 2014). As well as these direct benefits to patients and hospitals, ERPs also demonstrate a number of secondary benefits, such as empowering patients and carers to be directly involved in their pathway of care, and improve their own rate of recovery (Slater, 2010; Younis *et al.*, 2012). When effectively implemented, ERPs streamline surgical procedures in a way that benefit staff, patients, carers, and the healthcare system more generally.

Evidence supporting the use of ERPs as a means to improve surgical outcomes is continually growing, but research into the ERP implementation process itself is limited (Maessen *et al.*, 2007; Francis, N., Kennedy, R.H., Ljungqvist, O., Mythen, 2012). The current ERP literature focuses predominantly on the impacts of ERP design on patient outcomes and cost effectiveness, such as the reduction in patient length of stay, improving patient functional outcomes, reducing the rate of readmissions and a reduction in post-surgical 90-day mortality rate. Although some efforts have been made to describe the process of ERP implementation, this is often in limited detail (Billyard, Boyne and Watson, 2007; Slater, 2010), usually only reporting to what extent different elements of the pathway were adhered to by staff. Little is described by way of how this level of adherence was achieved, or why certain elements were implemented more successfully than others. As such, it is impossible to know if certain barriers to implementation are common, where they occur, or how they may be addressed. Despite the investment of considerable time and expense into designing rigorous, evidence-based ERPs, accounts of their successful implementation into practice remain inconsistent. In particular, the adherence by staff to post-operative elements of pathways, such as early mobilisation and rehabilitation, often suffers (Maessen *et al.*, 2007; Adamina *et al.*, 2011).

Understandably, hospital wards are busy and complex environments, and achieving 100% pathway adherence, fully integrating an ERP within practice, is hugely challenging. Without a clear focus on ERP implementation, it is hard to determine which individual factors aid or obstruct the implementation process, and under which circumstances. While a wide variety of barriers and facilitators to implementation have been suggested (Kahokehr *et al.*, 2009; Lyon, Solomon and Harrison, 2014), the effects of these factors will undoubtedly vary depending on the local context of the ERP, the agents involved, and the resources available. Without knowing which implementation strategies work best, to what extent, why, and under what circumstances, designing an appropriate approach to ERP implementation relies on policymakers' "best guess", and carries with it the inherent risk that previous errors are repeated, and certain adherence challenges remain unsolved.

The effectiveness of an ERP is limited by the success of its implementation: unless the pathway is adhered to, it cannot achieve its aims. If there are elements of ERPs which staff are consistently failing to adhere to, the full potential benefits of the ERP are not realised. As the NHS faces severe constraints both to budgets and resources, careful consideration must be given to designing evidence-based healthcare (such as ERPs) that cannot only save money but also ultimately improve quality of patient care. An important part of this is ensuring that well-designed programmes and interventions are effectively implemented into practice, so that they are correctly executed and have the greatest possible positive impact on hospital processes. ERPs are ward-level protocols which require adherence from staff at all levels in order to be executed effectively.

This review was designed to address this gap in understanding. Current ERP implementation literature consists of a diverse range of research concerning complex interventions, in complex settings, across a broad range of surgeries. As a result, developing a single causal theory to consistently predict the outcomes of ERP implementation in different contexts (different hospitals, different wards within the same hospital, or even the same ward but at contextually distinct times, such as different times of the year or after a rotation of staff) is unrealistic and improbable (Rycroft-Malone *et al.*, 2012). A more specific review, narrowing the focus to ERP implementation within a single surgical speciality (for example, colorectal surgery, where ERPs originated), would still encounter variation across the local context of ERP introduction; organisational, structural and individual level factors invariably affect the mechanisms of implementation, thereby also affecting the resulting outcomes of the ERP.

By synthesising a body of evidence and identifying key elements of context, mechanisms and outcomes, researchers generate abstract Context-Mechanism-Outcome (CMO) configurations which explain the data. These can then be tested empirically, and refined where necessary, producing

programme theories. These theories are not assumed to be absolute, and instead there is an implicit acceptance that they cannot predict every outcome in every context, but pinpoint what works in what circumstances, and identify a number of demi-regularities (Pawson, 2006) which can then provide practical guidance for similar interventions in future. These programme theories can then be tested and further refined, taking into account emerging data, and developing a better understanding of the phenomenon under study.

Relating this to my own research, I anticipated a number of challenges in the implementation of the PERFECTED ERP. Not only would it face similar barriers to implementation as experienced by now established ERPs, but it had the added complication of addressing an under-researched patient group. There is currently very little literature supporting the use of ERPs for PwD (Smith *et al.*, 2015), so I anticipated added resistance from clinical staff, whose training encourages the prioritisation of adopting "evidence-informed practice". Although this term refers broadly to practices informed by academic literature, clinical guidelines, expert consultation and recognised, contextually-sensitive best practice (Rycroft-Malone, 2008), even implementing changes which are supported by thorough reference to academic literature can be challenging (Haynes and Haines, 1998; Shaughnessy and Slawson, 2004; Spallek *et al.*, 2010; Wallis, 2012). Through this process of realist synthesis, I aimed to develop programme theories related to the implementation of ERPs in UK hospitals, which would help me to identify key areas to focus on in my empirical research, and build the framework for specific recommendations for policymakers designing similar interventions in future.

2.1.1 Review Aims

The purpose of this review was to develop a greater understanding of the ways in which clinicians and policymakers promote successful implementation of new ERPs, by consolidating the existing UK literature related to ERP implementation through a process of realist synthesis. The overall aim of this review was to explore the various implementation strategies used when introducing a new ERP, including what works, for whom, in what circumstances, to what extent, and how. By examining the existing literature, I identified the mechanisms (M) by which the strategies operate, the contexts (C) in which these mechanisms are triggered, and the resulting patterns in outcomes (O) (developing CMO configurations (Pawson and Tilley, 2004)). By reviewing and synthesising the available literature, I aimed to develop the underlying programme theories of ERP implementation, in order to inform future ERP implementation and optimise impact on patient outcomes.

In relation to my overall research project, the aims of this review were to identify specific gaps in understanding regarding ERP implementation, and to better inform the design and focus of my empirical study. By synthesising the existing UK ERP implementation literature in this way, I aimed to

gain a better understanding of common ERP implementation strategies, how they are used in specific contexts, the main barriers they encounter, and how these are managed. With this understanding, I would be in a better position to design an effective qualitative investigation which gave meaningful insight into the implementation process.

2.2 Methods

In the early stages of my research, when initially exploring the literature around ERP implementation, I realised that ERP literature (particularly in the UK) is limited. It is also varied in the methods used and style of reporting, making meaningful comparison challenging. After consideration and discussion with my supervisory team, I decided that a realist synthesis approach would be the most appropriate for managing an "uneven body of evidence" such as this (Rycroft-Malone *et al.*, 2012; J. Greenhalgh *et al.*, 2014). McCormack et al. (2013) argue that traditional systematic reviews fail to reflect important interactions between interventions and their setting. By striving to minimise bias, important details about how the intervention is enacted in a specific context are lost, including locally relevant challenges, and the interplay between diverse staff groups and the intervention aims. This can result in findings which are "in danger of being overly simplified and even misleading" (McCormack *et al.*, 2013). Systematic reviews are an excellent method of measuring and assessing the extent to which interventions work, but are unable to unpick how, why, in what circumstances and for whom those interventions work, limiting their usefulness in informing the design of future interventions and their implementation strategies (Pawson *et al.*, 2005). Realist synthesis is an increasingly popular method of evidence synthesis, which focusses on the production of programme theories in an attempt to explain why, when, how and in what circumstances interventions may or may not work (Pawson and Manzano-Santaella, 2012). This approach to evidence synthesis has been applied to a broad range of subject areas, including healthcare, social care, and implementation science more generally (Abhyankar *et al.*, 2013; Goodridge *et al.*, 2015; Vassilev *et al.*, 2015; Van Durme *et al.*, 2016).

Systematic reviews aim to minimise bias in order to analyse intervention effectiveness in isolation: realist synthesis accepts that interventions are not isolated mechanisms, but operate within different contexts, which impact outcomes. While systematic reviews are summative, realist synthesis aims to be explanatory, exploring the underlying and interrelated mechanisms of a phenomenon. Realist synthesis aims to consolidate existing research, providing a means of developing and describing underlying programme theories by which complex interventions are thought to work. Although not always explicitly stated in ERP design, implementation theory is implicit in the programme designers' assertion that, if executed in a certain way, an intervention will result in a desired outcome (Pawson, 2006). Additionally, existing ERP research is limited and varied

in methods used and style of reporting, making meaningful comparison challenging. Because of this, I decided that a traditional systematic review approach would be unsuitable. Instead, I chose to adopt a realist synthesis approach (Pawson, 2006; Rycroft-Malone *et al.*, 2012).

To guide the initial search strategy, I had an open discussion with my supervisory team regarding my existing knowledge of knowledge translation, organisational interventions and behaviour change theories. I also consulted with field experts and researchers in ERP design and implementation (this included researchers involved in the PERFECTED project), and a scoping search of existing ERP literature. From this initial stage, I developed initial propositions to be investigated and tested during the data synthesis process, to guide the development of later programme theories. The key propositions developed were:

1. If staff feel valued and involved in the ERP implementation process, then they are more likely to adhere to the pathway in practice

2. If managers and policymakers develop the ERP and implementation strategy with sensitivity to local context (including staffing levels, resources, organisational structure), the pathway is more likely to be adhered to, and will be sustainable in the long term

I also used this process to develop the key search terms, inclusion criteria and guiding questions for the main literature search.

2.2.1 Search strategy

Unlike in a systematic review, data eligible for inclusion in a realist synthesis is not restricted by research type, but by what it contributes to the question posed by the reviewer (Pawson *et al.*, 2004; Wong, Westhorp, *et al.*, 2013). By definition, systematic reviewing involves a systematic appraisal of relevant literature, as pre-defined by specific inclusion and exclusion criteria. Realist synthesis demands a more iterative and interpretative approach, collecting contributing literature from a broad range of sources (peer-reviewed journal articles, review articles, but also grey literature such as opinion pieces, case studies, guidelines and reports) and appraising their quality based on what they contribute in terms of addressing the review aim. Rather than adopting the systematicity demanded of systematic reviewing, the emphasis in realist synthesis is on relevance, rigour, and transparent reporting.

I conducted a search of the literature, identifying papers dated from 2000 onwards. I restricted the search to this timeframe as ERPs were only introduced in the UK in the early 2000s. I used a combination of key words and search terms which included enhanced recovery, fast-track surgery, multimodal surgery, implementation, integration, service improvement, national health service,

hospital and acute. I conducted the search using databases including EBSCOhost, PsycINFO, MEDLINE and Cumulative Index of Nursing and Allied Health Literature (CINAHL), as well as Google Scholar and a general web search. I decided not to conduct a hand search of journals due to the age of the research: as ERPs were only introduced in the UK from the early 2000s, any relevant literature will have been published within the last 15 years and therefore accessible via online databases. I also checked reference lists of identified key articles in order to ensure all relevant articles had been included in the review.

2.2.1.1 Inclusion criteria

I included papers if they described some aspect of the ERP implementation process, including implementation strategies, barriers and facilitators to implementation, and/or ERP adherence and sustainability. All forms of literature were potentially eligible for inclusion in the review, including peer reviewed journal articles down to case reports and correspondence pieces, as long as the paper discussed instances of ERP implementation. I excluded papers if they did not either describe the implementation process, the context in which the ERP was introduced, or if implementation was only mentioned briefly (i.e. no detail given about mechanism of implementation).

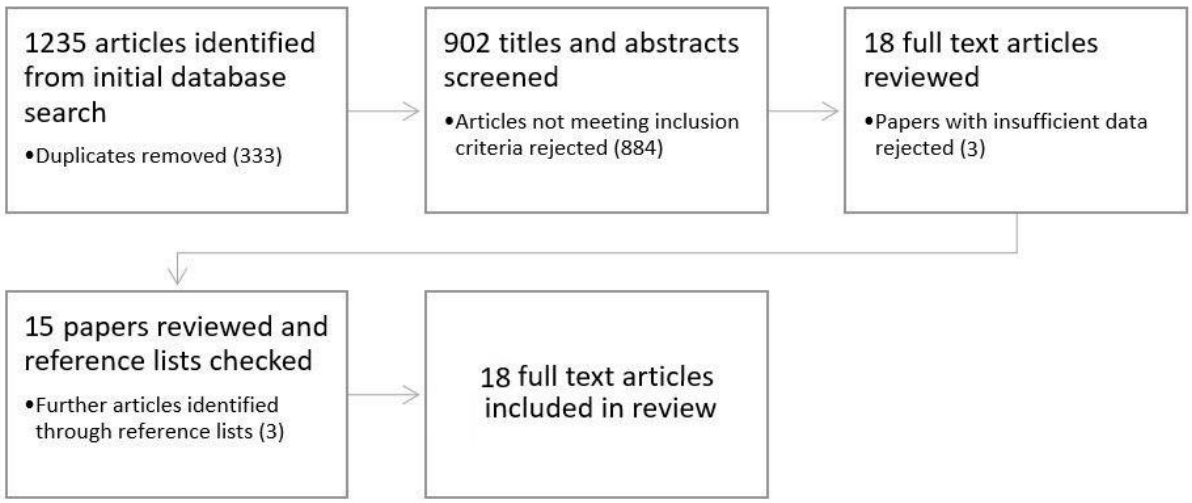

Figure 1. Search strategy

2.2.1.2 Identifying candidate papers

Initially, I identified fifteen papers, which described ERP implementation or adherence, for inclusion in the review. Of these, six were original research papers, four were reviews of existing literature, one was a guideline document from the Royal College of Surgeons, one scientific impact paper from the Royal College of Obstetricians and Gynaecologists, one was a focus piece giving advice from experience of implementing ERPs, and the final paper included correspondence concerning a piece of original research (which included more detail about ERP implementation than in the research

paper concerned). All of the original research papers reported findings from single-centre research projects, and covered a range of surgical specialities (two colorectal, two gynaecology/obstetrics, one orthopaedic, one urology). All of the papers identified at least one of the implementation strategies described in my *a priori* propositions.

I checked the reference lists of these papers, and studies included in the four review papers, for relevance, but the majority of these did not contain any additional information related to ERP implementation which had not already been covered by the reviews. However, included in the review by Paton *et al.* (2014) were a number of case studies compiled during a 2011 report by the Department of Health's "Enhanced Recovery Partnership Programme (ERPP)" (Department of Health, 2011). Due to the relevance of this report to this review, especially regarding consideration of implementation strategy across multiple sites (the ERPP involved 15 hospitals), this report and three of the original case studies were included in the review (meaning a total of 18 papers were included in the review). I only included three of the case study reports partly due to data saturation (the full report contributed similar data to the individual case study reports), and partly due to the inaccessibility of further case study reports.

2.3 Data extraction & synthesis

As explained above, unlike in a systematic review, publications are not rejected prior to inclusion in a realist synthesis based on a quality appraisal. Instead, each candidate paper is mined for relevant data to further develop the explanatory model (Pawson *et al.*, 2004). Rather than papers being wholly rejected on the grounds of quality appraisal, the value of each paper is determined by its contribution to increasing understanding and addressing the review objectives. Pawson (2013) advises against the use of data extraction forms in realist synthesis, as he argues that their rigid structure can limit the types and breadth of data extracted from a diverse range of sources. Instead, I analysed and extracted the data iteratively, ensuring that I constantly and consistently related the analysis back to my review objectives.

In the main, I conducted the reviewing of papers myself, with regular meetings (approximately every 4-6 weeks over the review period, totalling ten meetings) with my supervisory team to discuss and review findings. Any discrepancies were discussed in detail until consensus was reached. This process was iterative, and in line with common realist synthesis practice (Pawson *et al.*, 2004; Pawson, 2013).

2.3 Results

2.3.1 Papers included in review

Each of the included papers made some mention of at least one formal strategy used in the implementation of ERPs. The level of detail in reporting implementation strategy varied, but on the whole was limited, with a strongly outcome-focussed approach. None of the papers described a rationale for why a particular implementation strategy was chosen, although the design and content of the ERP itself was described in good detail in most cases. The most commonly used strategies were the tailoring of ERPs to fit local contexts and resources, the use of a multidisciplinary steering group to identify and design necessary changes, regular auditing in order to assess ERP compliance, rolling training programmes and the use of an "ERP champion" or change agent to coordinate and drive the implementation process. Some of these strategies were interdependent (for example, the change agents conducting the audits, the training programme agreed via a multidisciplinary working group, ERP tailoring discussed within the multidisciplinary working group or via change agent consultations with ward staff), and as such I analysed the data in detail, to synthesise the findings and develop CMO configurations which were suitably abstract to capture the essence of implementation.

The majority of papers discussed the involvement of stakeholders in the ERP design and implementation process. The format of these varied, with some reporting the setup of multidisciplinary working groups or project teams (Abell et al., 2013; Billyard et al., 2007; Crawford et al., 2013; Meale & Cushion, 2010; Mount Vernon Hospital, 2011; Rooth & Sidhu, 2012; Royal Berkshire Hospital, 2011; Torbé et al., 2013; Wrench et al., 2015) in order to contribute to the development of the pathway and agree the ERP goals. Stakeholder consultation served to cement existing team relationships and integrate working (Billyard et al., 2007), provide opportunities for cross-disciplinary education, improve communication, and help staff to gain greater insight into the rationale and evidence base behind ERP elements (thus reducing resistance to change) (Meale & Cushion, 2010; Torbé et al., 2013). One paper recommended consultation with a broad range of staff (Medway NHS Foundation Trust, 2011), not only a small, specifically selected core working group, in order to foster positive attitudes towards the pathway and gain a greater understanding of all aspects of the surgical pathway.

Authors	Date	Journal	Methods/setting/sample/brief summary	Key Findings (implementation specific)
Abell D, Long O, Skelton V, et al.	2013	International journal of obstetric anesthesia	Correspondence piece commenting on recent research into ERP implementation	Facilitators for ERP implementation: build on existing practice in order to minimise disruptive change; representatives from all staff groups involved in multidisciplinary team to discuss how to apply ERP in practice; staff feel they have adequate input into ERP design and implementation process; utilise existing resources to minimise cost and demand on staff; staff understand the benefits of the ERP.
Ahmed J, Khan S, Lim M, et al.	2012	Colorectal Disease	Systematic review of ERP compliance and variations in practice – 14 studies included in review	Issues identified: none of the studies reviewed were fully compliant to the ERP protocol, postoperative components particularly suffered Authors suggest this may be due to the inheritance of obsolete practice from traditional mentor-student relationships. Facilitators for ERP implementation: stakeholder involvement from all staff affected by ERP; staff "buy-in" to the ERP; ERAS champion to lead the process; regular audit and dissemination of findings.
Billyard, Boyne S, Watson J	2007	Gastrointestinal Nursing	Description of ERP implementation at Torbay Hospital (500-bed district general hospital in South West England); specialist registrar with	Facilitators for ERP implementation: positive team approach; agreed care pathway; strong leader with project management skills; continual learning & training

			ERAS experience; experienced colorectal surgeon championed project; strong project team, with matron coordinating and leading; stakeholders invited to be involved as needed; educational opportunities utilised as needed	Authors note that a PPI event would have been useful to inform development of patient information leaflets.
Crawford RAF, Acheson N, Nordin AJ, et al.	2013	Royal College of Obstetricians & Gynaecologists	Scientific impact paper consolidating existing research into ERP in gynaecology	Facilitators for ERP implementation: input, engagement and commitment from all staff affected by ERP; core team of stakeholders (multidisciplinary) to coordinate process; ongoing education; staff understanding their role within the pathway; locally agreed pathway; clear documentation; ongoing data collection.
Department of Health	2011	Enhanced Recovery Partnership Programme	Report outlining multi-site initiative, experiences of implementing ERPs; overview of experiences of sites involved	Facilitators for ERP implementation: ERP champions; raising awareness & engaging staff motivation; standardised processes; integrated and stable multidisciplinary team.
Khan S, Gatt M, Horgan A, et al.	2009	Association of Surgeons of Great Britain and Ireland	Guideline document for ERP implementation (despite title of document, practical guidance for implementation strategy is limited – focus is primarily on development of ERP components)	Facilitators for ERP implementation: regular audit of ERP adherence and outcomes; continuous staff education; multidisciplinary team approach; ERAS champion to coordinate process.

Lee D, Haynes C, Deans G, et al.	2011	Journal of Evaluation in Clinical Practice	Description of ERAS introduction - UK district general hospital, patients undergoing elective colorectal surgery, research conducted February 2008 – April 2009. No specific details given regarding method of ERAS implementation.	Challenges: evidence base limited for certain aspects of pathway, lead to difficulties in getting full support from clinical staff; changes to current practice proved challenging; "complex relationships between organizations, professionals, patients and carers". Authors advise that ERAS implementation should be tailored to culture and values of the organisation; reward and recognition should be utilised as motivators for change.
Meale PM, Cushion J	2010	Current Anaesthesia & Critical Care	Commentary piece on ERP design and implementation	Facilitators for ERP implementation: development group including key stakeholders; literature search of current evidence; group decision making re: programme goals; stakeholder analysis (who will be affected by project); meet with wider staff involved with ERP; establish implementation group; develop/tailor ERP document; manage change resistance; highlight benefits of ERP; monitor compliance and outcomes Barriers to ERP implementation: resistance to change; staff failing to engage with process; ambiguous information.

Medway NHS Foundation Trust	2011	Enhanced Recovery Partnership Programme	Part of the Enhanced Recovery Partnership Programme [30]. Case study describing experience of introducing musculo-skeletal, colorectal, urological and gynaecological ERPs.	Facilitators for ERP implementation: involvement of all staff groups affected by ERP; positive attitude Barriers to ERP implementation: lack of funding & resources; documentation not being used appropriately.
Mount Vernon Hospital	2011	Enhanced Recovery Partnership Programme	Part of the Enhanced Recovery Partnership Programme [30]. Case study describing experience of introducing musculo-skeletal ERP. Desire to emulate evidence-based practice observed in USA & Denmark.	Embedded and standardised ERP elements Facilitators for ERP implementation: multidisciplinary ERP team; standardised practice of staff; endorsement from senior management; familiarity with evidence base; appoint ERP champion; critically appraise practice ongoing; regular multidisciplinary meetings; regular research and audit Barriers to ERP implementation: reluctance of senior clinicians to change practice; reluctance of patients to adopt new practice.
Paton F, Chambers D, Wilson P, et al.	2014	BMJ Open	Rapid evidence synthesis of 8 databases 1990-2013, assessing effectiveness and implementation of ERAS programmes; UK settings. 17 systematic reviews and 12 RCTs included.	Barriers to ERP implementation: resistance to change from patients and staff; lack of funding and support from management; staff turnover; poor documentation and lack of time to complete documentation; “other practical issues”. Facilitators for ERP implementation: dedicated project lead to coordinate and sustain pathway; multidisciplinary approach; continual education of staff.

Rooth C, Sidhu A	2012	British Journal of Nursing	Description of ERP implementation experience – gynaecology unit, London tertiary referral centre, September 2010. ERP coordinated by dedicated ERP Nurse Practitioner. Multidisciplinary working group met monthly. Regular teaching sessions given to staff to aid understanding of ERP and rationale.	Some issues with compliance identified with certain staff groups – notably domestic staff (involved in post-operative/recovery arm of ERP). Authors highlight the need for all staff groups to have insight and understanding of ERP. Multidisciplinary working and ERP Nurse Practitioner identified as essential to successful ERP implementation. Changes in staffing and maintaining motivation identified as barriers to ERP success.
Royal Berkshire Hospital	2011	Enhanced Recovery Partnership Programme	Part of the Enhanced Recovery Partnership Programme [30]. Case study describing experience of introducing musculo-skeletal, colorectal, urological and gynaecological ERPs. Trust had some previous ERP experience but this hadn't been sustained.	Facilitators for ERP implementation: board approval and engagement; multidisciplinary approach; steering group with regular meetings; ERP project lead to coordinate process; engagement of ward staff; regular audit and data collection; education Barriers to ERP implementation: some resistance to change from surgical and nursing staff; initial lack of ERP nurse/champion; patients resistant to change.
Slater R	2010	British Journal of Nursing	Article outlining the key elements of ERP; review of current literature	Highlights the need for resources to fully implement an ERP, including time to educate staff appropriately. Estimates a 12-18month delay period for impacts of ERP to be fully realised.

				Nurse facilitator to coordinate implementation seen as a requirement. Emphasises that all aspects of ERP should be understood by all members of multidisciplinary team to enable implementation.
Smith J, Meng ZW, Lockyer R, et al.	2014	BJU International	Description of ERP implementation experience at University Hospital Southampton for patients undergoing radical cystectomy; retrospective study of 133 patients between October 2008 and April 2013 (non-ERP patient group (n=69), ERP-1 group (n=37) and ERP-2 group (n=27)).	Facilitators for ERP implementation: ongoing education for all staff groups; strong team-working involving all staff groups.
Torbé E, Crawford R, Nordin A, et al.	2013	The Obstetrician & Gynaecologist	Review of UK gynaecological ERP research	Barriers to ERP implementation: habitual behaviour which favours familiarity over evidence; Facilitators for ERP implementation: stakeholder involvement (from all staff groups); appropriate training; ERP champion to facilitate process; locally agreed pathway; monitoring and audit of compliance and outcomes.
Wainwright T, Middleton R	2010	Current Anaesthesia	Overview of ERP and description of an orthopaedic ERP implementation experience at an NHS district general hospital (Royal	Barriers to ERP implementation: complex staff and organisational issues associated with introducing change.

		and Critical Care	Bournemouth); first introduced 2007; pathway re-design was consultant surgeon and pathway manager led;	Facilitators for ERP implementation: specific training; strong clinical and managerial leadership; team approach; standardised procedures; organised logistical framework; commitment to change and improve patient care.
Wrench IJ, Allison A, Galimberti A, et al.	2015	International journal of obstetric anesthesia	Description of ERP implementation experience at tertiary care centre for patients undergoing elective caesarean section; ERP locally designed by multidisciplinary team and introduced 2012; initiatives introduced to encourage uptake; guideline documents developed.	Facilitators for ERP implementation: close multidisciplinary working; effective team management; information and education.

Table 1: summary of papers included in review

However, some papers reported little or no stakeholder involvement in the design and implementation process, but it is unclear whether or not this is simply due to a lack of detailed reporting. For example, Lee et al (2011) do not mention stakeholder involvement in ERP design or implementation, but in their concluding comments, they discuss the importance of staff involvement in the change. Likewise, although Ahmed et al (2012) do not directly discuss working groups in the design of the ERP, they discuss the role of stakeholder "buy in" to the ERP model, in order to challenge obsolete practice, and highlight the importance of good multidisciplinary working throughout the pathway. Although these allusions suggest the use of stakeholder consultation in the ERP implementation process, without more detailed information, it is impossible to comment on the impact and interaction of context and circumstance on generative mechanisms, and subsequent outcomes.

Although the majority of papers reported some level of stakeholder consultation, one consistent observation was that this rarely involved therapies staff, healthcare assistants or support workers (i.e. the staff primarily involved with patients' post-operative care and recovery). The main focus of ERP design and implementation involved consultation with pre- and intra-operative staff, such as surgeons, anaesthetists and nurse specialists. The post-operative/recovery stage typically suffers the lowest adherence rate across ERPs (Ahmed et al., 2012; Khan et al., 2009), and Lee et al (2011) suggests this may be due to post-operative care staff preferring traditional methods of care, or viewing these as "kinder" to patients (e.g. meals in bed, rather than encouraging mobilisation to eat in a dining room). This highlights the importance of identifying areas of non-adherence, in order to target ongoing staff training, and increase awareness and understanding of the rationale and evidence-base behind ERP elements. By challenging staff preconceptions, and discussing the evidence and rationale behind the proposed change directly with those members of staff affected, policymakers can work proactively to reduce resistance to change, and improve ERP adherence.

The majority of papers discussed the importance of the role of a change agent (such as an Enhanced Recovery Nurse Practitioner, or ERP champion) in driving and coordinating the ERP implementation process (Billyard et al., 2007; Department of Health, 2011; Khan et al., 2009; Meale & Cushion, 2010; Mount Vernon Hospital, 2011; Paton et al., 2014; Rooth & Sidhu, 2012; Royal Berkshire Hospital, 2011; Slater, 2010; Torbé et al., 2013). This role was usually occupied by a member of nursing staff, often recruited from existing ward nurses, but guidelines suggest that this role could be filled by staff from other specialities (Khan et al., 2009) (although this is not supported or demonstrated by existing evidence). One possible explanation for the success of using nurses as ERP champions in driving the ERP agenda is a good working knowledge of hospital nursing practices, and an existing rapport with staff (particularly true if the change agent is recruited internally). One of the papers did

not appoint a change agent (due to lack of financial resources), but did suggest that had this been possible, this may have helped in the management of the pathway, increasing compliance and improving communication (Lee et al., 2011). Generally, the role of change agent involved close communication with the multidisciplinary team, provided a main point of contact for both staff and patients, was responsible for ongoing ERP adherence audits (Smith et al., 2014), identifying and delivering ongoing training needs (Slater, 2010).

The staff occupying the role of ERP change agent often did not have previous experience in this role, or of ERPs in general, which was understandable given the relatively recent national uptake of ERPs. To help develop the change agent's understanding of ERPs and inform their strategies for implementation, one of the change agents was given the opportunity to visit a ward with an already established ERP (Rooth & Sidhu, 2012). Although the unit visited was of a different clinical speciality to the change agent's own ward, this not only provided an opportunity for change agents to gain insights into the ERP implementation process (and inherent challenges), but also gave the agent a professional contact with significant experience and expertise, who could serve as a source of advice and support. Despite the differences in context and focus between the change agent's own ward and their "mentor ward", the experience shared helped to develop an understanding of the change process, and provided valuable transferable concepts which the change agent could adapt and introduce in their own setting.

The use of a change agent to drive the implementation process should be distinct from over-reliance on this one individual, to the detriment of the overall life of the ERP. Rooth & Sidhu (2012) observed a significant drop in ERP adherence during the change agent's period of annual leave, suggesting that appropriate and effective cross-cover of this role is vital for long-term sustainability and fidelity to the ERP. The emphasis for the change agent is on coordination, rather than sole responsibility for the entire pathway and its implementation. Part of effective coordination is the ability to delegate responsibility appropriately, as this not only mitigates against a drop in adherence should the change agent be absent for whatever reason, but it also makes best use of the broad range of skills available within a multidisciplinary team. Taken further, the role of change agent need not be occupied by a single staff member, instead policymakers could explore a "distributed change agency" approach (Buchanan *et al.*, 2007), which is akin in many respects to assigning change agent responsibilities to a multidisciplinary working group.

2.3.2 Developing programme theories

Following analysis and synthesis, I developed two programme theories, encompassing a number of dependent CMO configurations. These theories were concerned with staff consultation and the use

of a change agent in ERP implementation. Based on the extracted data, I identified the desired outcomes of successful implementation, and I then tracked these back to identify the mechanisms resulting in such outcomes, and the contexts necessary to trigger them. I analysed the literature iteratively, on multiple occasions, to extract any further relevant details, and from these I developed a number of CMO configurations. I did this by identifying demi-regularities in the literature, examining outcome patterns and the conditions surrounding them. I then synthesised the extracted data, to draw out the essential characteristics common to the implementation processes. These formed the basis of the initial CMO configurations. After I developed the initial CMO configurations, I then compared them with the source literature, tested them, and refined them as necessary. Figure 2 shows an outline of the CMO configurations developed as part of the "staff consultation" programme theory.

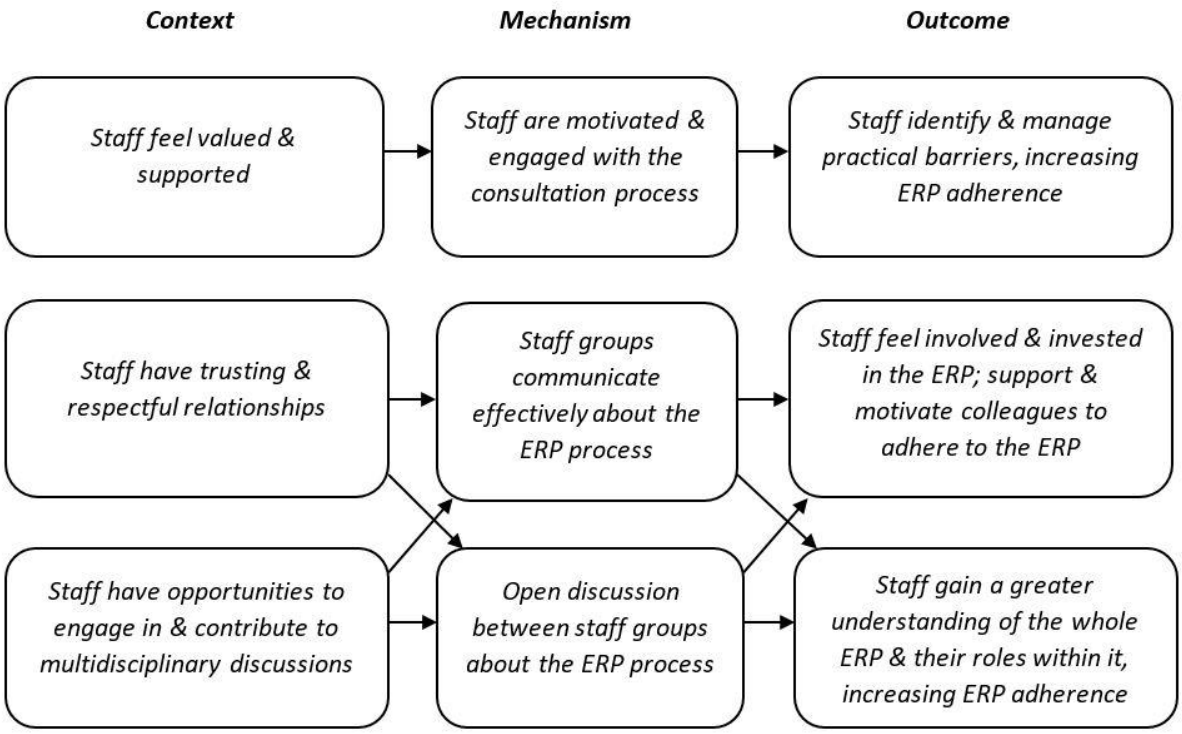

Figure 2. CMO configurations within programme theory of staff consultation

Based on my analysis of the literature, I hypothesise that staff consultation works most effectively when staff feel valued and supported both by their managers and by their colleagues, have trusting and respectful interdisciplinary relationships, and there are opportunities for staff to contribute to multidisciplinary discussions (context); this facilitates open discussion between different staff groups (mechanisms); as a result, this allows for identification of practical barriers to ERP implementation, how these barriers might be realistically managed, and results in improved pathway adherence (outcome).

In the articles I reviewed, not all items on the pathways described are adhered to fully. Most commonly, post-operative elements related to mobilisation, rehabilitation and pain management, often demonstrated much lower levels of adherence than other stages in the ERP. However, based on the available evidence, reasons for why this is the case are not clear. I hypothesise that this is in part due to the fact that this phase primarily involves therapies staff, healthcare and nursing assistants, who are often not involved in policy design and staff consultation. The earlier phases of ERPs, which involve staff nurses, surgeons and anaesthetists, do not typically have adherence issues. It is possible that not all relevant staff groups are equally valued, or represented in the consultation process, which results in a lack of understanding of the pathway and its rationale, and as a result these staff lack the necessary skills, knowledge or motivation required to implement the ERP appropriately. However, in order to explore this hypothesis further, more detail is required regarding the context of implementation and its impact on how mechanisms operate. Another potential issue is frequent turnover of staff, or the use of agency staff, who may not be familiar with the ERP or its evidence base, highlighting a need for ongoing and rigorous training.

The current literature concerning ERPs is heavily outcomes-focused (particularly regarding the reporting of pathway adherence levels and patient outcomes), and has minimal detail about the implementation process (e.g. specifically who was involved in staff consultations, the level of involvement, the types of discussions conducted). This lack of detail makes it challenging to identify whether the process of implementation could relate, positively or negatively, to the outcomes achieved. Using the CMO configurations I developed (shown in Figure 2), it may be possible to speculate. For example, if certain staff groups are simply not invited to be involved in the consultation process, these staff do not have opportunities to contribute to the multidisciplinary discussion (context), meaning that the generative mechanisms of “open discussion between staff groups” and “staff communicate effectively within and between teams” may not be triggered. As a result, the extent to which staff feel involved and invested in the ERP, are able to support and motivate colleagues, and understand the whole ERP and their roles within it (outcomes) may be affected, thereby affecting ERP adherence.

Alternatively, certain staff groups may not feel valued or supported (context), which can result in these staff not feeling motivated or engaged in the consultation process (failure to trigger mechanism), as a result, some practical barriers fail to be identified and addressed (desired outcome not achieved), and staff are unable to adhere to the ERP. To mitigate against this, change leaders can either identify and manage barriers retrospectively (although this may cause unnecessary delays, put a greater burden on staff, and is arguably avoidable), or work to ensure staff across the pathway feel supported and valued. This latter approach has the added advantage that it will likely increase staff

motivation and readiness for change. Either approach highlights the importance of a dedicated change agent, working collaboratively with ward staff to facilitate change. Figure 3 shows the CMO configurations concerned with the "change agent" programme theory.

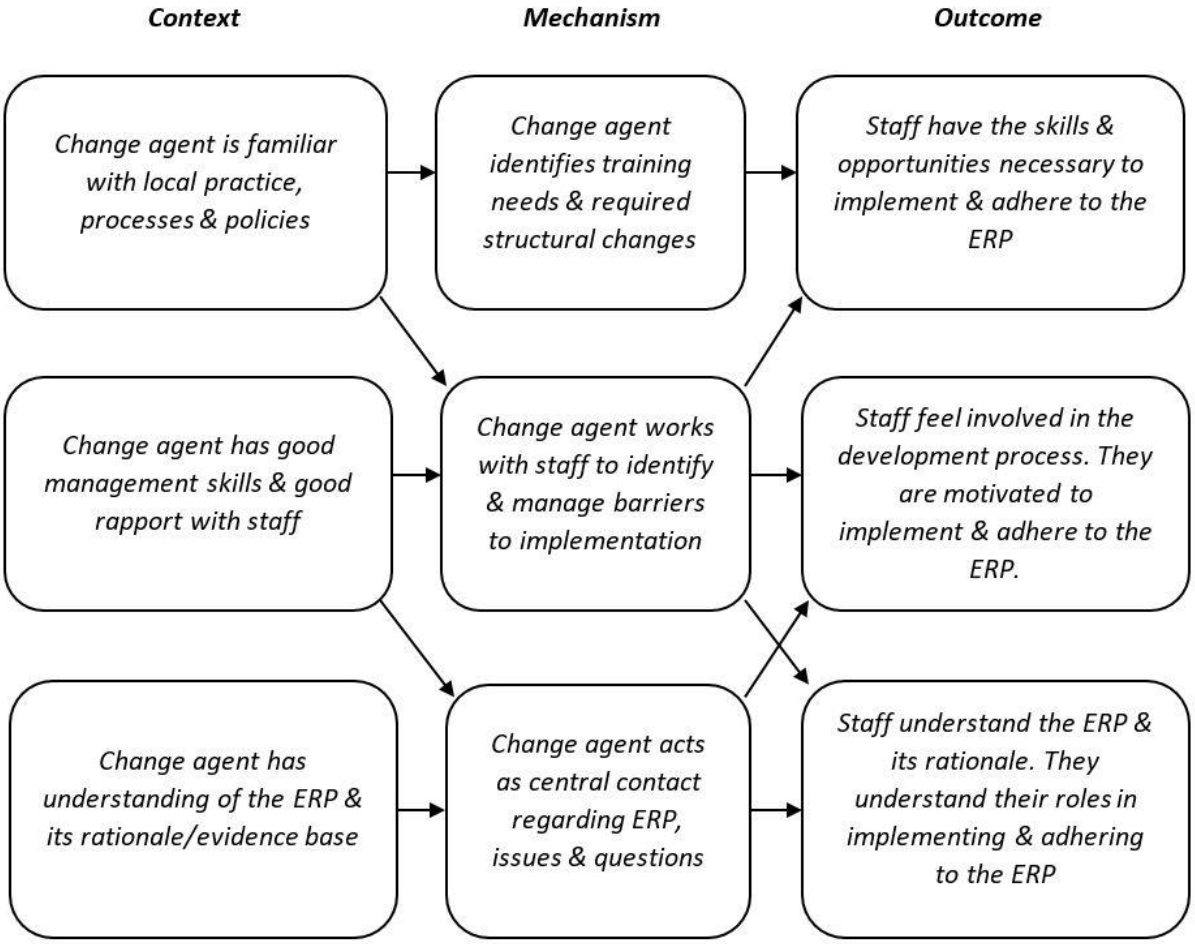

Figure 3. CMO configurations within programme theory of change agency

I hypothesise that the appointment of a change agent/ERP champion works best when the change agent is familiar with existing local practices, has a detailed understanding of the ERP and its rationale/evidence base, has good management skills, and rapport with a broad range of staff (context). This enables the change agent to drive the implementation process on the ground, acting as a main point of contact to resolve ongoing issues, identify areas for development such as skills training needs, and liaise directly and effectively with staff to problem solve regarding barriers to implementation, generating positive attitudes towards the ERP (mechanisms). The outcome of this engagement in increased staff understanding of the ERP, reduced resistance to change and improved staff adherence to the pathway (outcomes).

Papers which discussed the use of a change agent in the ERP implementation process emphasised the importance of this role to develop good interdisciplinary communication and cohesion. Studies

not using a change agent reflect that the process could be greatly improved had one been employed. However, this is not without issues, as it requires an individual who has specific pre-existing skills and knowledge, to undertake a personally and professionally demanding role. These are not necessarily skills related to specific discipline or background, but skills relating to person management, including an awareness of team dynamics, creative problem solving, and an ability to facilitate collaborative working. Additionally, the change agent should be effective in sharing those skills and knowledge throughout the team, as overreliance on one individual to ensure the smooth running of an entire pathway can result in noticeable dips in adherence should that individual be removed or absent for any reason (Rooth & Sidhu, 2012). An ability to delegate tasks appropriately is vital.

2.4 Discussion

This review highlights the importance of a planned and well-coordinated process of implementation, in which members of all staff groups across the pathway are supported, informed, and enabled to implement the necessary changes to practice. This is reflected in the wider implementation research literature (Heyland, Cahill, & Dhaliwal, 2010; Lau et al., 2015). Regardless of surgical speciality, a theoretically-based and planned process of implementation results in sustained ERP adherence (and subsequent improved outcomes for patients).

The implementation strategies I analysed in this review were variable, with variable results. Although the implementation process was not the primary focus for the original articles, it is important to emphasise that the aims of an intervention can only be achieved if it is implemented appropriately (Maessen et al., 2007). If implementation strategies are not prioritised and considered carefully, this can limit the effectiveness and sustainability of the intervention, and this is reflected in the wider international ERP literature (Gillissen et al., 2015; Martin et al., 2016; Pearsall et al., 2014). None of the papers included in this review described a rationale for why strategies for implementation were selected, which suggests either a lack of reporting detail, a lack of evidence, a lack theory-based implementation, or a combination of the three.

It would be short-sighted to consider any programme theory complete. The lack of detail available made the process of developing CMO configurations challenging, as often important contextual information was absent. Although outcomes and mechanisms were relatively straight-forward to identify, contexts often had to be inferred. Although these were later refined and shown to be robust in relation to the existing literature, the current programme theories would benefit from further development. Building on this, my empirical study will use insights from this review to

produce new details regarding ERP implementation in a specific context, allowing more nuanced development of the programme theories.

2.4.1 Strengths and limitations

The quality of a review is often limited by the primary literature upon which it is based. For the purposes of this review, I only included literature discussing ERPs in UK hospitals. Implementation strategy is context sensitive, and national context has a significant impact on how healthcare is delivered, managed and evaluated (Kernick, 2000). I decided that broadening the review to include the wider international literature would result in a loss of contextual specificity and therefore render the review less meaningful, in terms of developing programme theories specifically for the UK hospital context. However, as ERP implementation studies conducted in the UK have limited representation in academic literature at present, the evidence I had available to draw upon was also limited. Given the findings from this review, a further comparison with international literature may provide additional insights and transferable concepts.

Studies describing the ERP implementation process are limited, and the description of implementation is often brief, lacking important detail. Current reporting of ERP implementation has an overwhelmingly outcome-focussed approach, limiting the transferability of findings to other contexts, as it is challenging to identify what circumstances are needed to trigger specific generative mechanisms to produce the desired outcomes (i.e. ERP fidelity and sustainability). Future research into ERP implementation, providing thorough and detailed reporting of specific local context, and exploring the process of implementation design, would help to develop these programme theories further.

It is possible that a different group of researchers conducting a realist review addressing the same aims may select different datasets for inclusion in their review, make different judgements about the data, highlight different areas of significance, categorise the contexts, mechanisms and outcomes differently, and subsequently develop different programme theories. However, this is true of any realist synthesis, and only further demonstrates the complexity of this research (McCormack et al., 2013; Rycroft-Malone et al., 2012). This is not typically an issue in systematic reviewing, as this approach follows a prescriptive and clearly demarcated process, involving strict inclusion criteria and data extraction, intended to make the process clear-cut and replicable (Gopalakrishnan and Ganeshkumar, 2013). However, the overall aim of realist syntheses is not necessarily to produce objective, replicable or generalisable findings, but to synthesise current literature and knowledge to provide insight and meaningful guidance for practical application in real world settings. As posited by principal researchers in the development of the realist synthesis approach, realist synthesis “has an

explanatory rather than judgemental focus. It seeks to unpack the mechanism of *how* complex programmes work (or *why* they fail) in particular contexts and settings" (Pawson *et al.*, 2005). The programme theories they produce represent the "best fit" given the currently available evidence, and are intended for ongoing testing and further development.

2.4.2 Personal reflections on the process

Reviewing the literature through a process of realist synthesis was extremely challenging, not only because it was a process I had never undertaken before, but because the realist synthesis process is less prescriptive. As it is by its nature iterative and interpretive, the process of conducting a realist synthesis is flexible, depending upon the reviewer's aims, and the breadth and type of evidence available. Unlike the more commonly used systematic review, realist syntheses do not demand the reviewer follow a clearly demarcated and prescriptive process. Instead, the selection and inclusion of literature relies more on the reviewer's judgement as to what is useful and meaningful in addressing the aims of the review.

In some ways, I saw some parallels between conducting a realist synthesis, and qualitative research methods. Their more traditional counterparts, systematic review and quantitative research methods respectively (traditional in medical and healthcare research, at least), follow strict, prescriptive procedures, controlling for bias and aiming to produce clear-cut, generalisable findings. Conversely, both realist synthesis and qualitative research highlight the importance of context, and seek to explore the impact of contextual differences on mechanisms and outcomes. It was for this reason that I chose to adopt these methods to address my research aims.

2.5 Conclusions & Implications

The programme theories developed from this review are still in their early stages of development. This review highlights important issues in the process of implementation, and subsequent reporting, of ERPs currently practiced in academic research. I anticipate the findings will be useful in assisting hospital administrators, clinicians, and key decision makers to design appropriate and effective implementation strategies, taking into account critical factors which impact generative mechanisms of implementation success. By proposing these programme theories, I would encourage other researchers to test them as part of future ERP implementation research. By reporting how implementation varies between different settings, further development and refinement of implementation theory can occur.

Following the completion of this review, I discussed my findings with my supervisory team and members of the PERFECTED research team. I presented findings from this review at the European Health Psychology Society's annual conference (Coxon, Nielsen, *et al.*, 2016) and redrafted the

review for publication in a peer-reviewed journal (Coxon, Nielsen, *et al.*, 2017) (see Appendix 1). This review formed an important part of developing the next stage of my research, helping me to identify the gaps in current understanding of ERP implementation, and how these could be addressed through empirical research. Although my review highlighted the importance of staff consultation, and the use of a dedicated change agent to coordinate the implementation process, limited detail is available about how this can best be achieved. Most notably lacking in implementation reporting was details about the contexts in which the ERPs were introduced, and variation in context can have significant implications for the success of any chosen implementation strategy (Rousseau and Gunia, 2016). Without a comprehensive understanding of how contexts and mechanisms interact to achieve desired outcomes, recommending specific implementation strategies remains challenging.

Chapter 3 – Methodological approaches to studying the implementation of a new ERP

3.1 Introduction

In this chapter, I will discuss how the findings of my realist synthesis in **Chapter 2** informed the design of my empirical study of the introduction of a new ERP in three UK hospitals. I aim to justify the use of qualitative research methods as the most appropriate approach for exploring the implementation process, examining the main barriers and facilitators to successful implementation, and providing valuable insights into the challenges faced by the change agents tasked with coordinating the process. Throughout the following chapters, I refer to the ERP of study using a variety of terms, including: "the ERP", "the pathway", "the PERFECTED ERP" and "PERFECT-ER". I refer to the SILs both as "SILs" and "change agents".

My realist synthesis highlighted the following main limitations in the current literature related to ERP implementation in the UK:

- In the majority of cases, no rationale is given as to why a particular approach to implementation is selected
- Little detail is given regarding the nature of the change agent or the staff consultation process
- The context in which the ERPs are implemented is given in limited detail
- There is currently very limited qualitative enquiry into the lived experiences of staff involved in ERP implementation programmes

Overall, my review demonstrates that although ERPs are designed using a rigorous, evidence-based process, the actual process of ERP implementation is an element of pathway introduction which is often overlooked, or given only passing mention in the majority of ERP research. Although my review identified the use of a change agent to coordinate implementation, and consulting with staff, as the two most commonly used strategies to aid ERP implementation, how and why these strategies were used was not clear. The literature included in my review gave limited detail as to the nature of the employed change agents, and gave little explanation as to how best to conduct consultation with staff.

Applying the programme theories developed through my realist synthesis, I aimed to address this gap in understanding by providing a rich description of the ERP implementation process, within the context of an action research project based at the UEA. My realist synthesis identified a number of

areas in existing ERP literature which lacked detail, and these prompted me to develop four main research questions which I intended to address through my empirical study. These were:

1. What are the main barriers and facilitators to ERP implementation?
2. How do change agents promote pathway adherence by staff?
3. What are the key skills necessary to fulfil the role of a change agent?
4. How do change agents negotiate the complex network of multidisciplinary staff relationships in order to achieve implementation success?

In order to address these questions, I needed to design a study which enabled the production of a rich description of the phenomenon of study, namely the implementation of an ERP in real-life settings. Using qualitative research methods, my study was designed to provide an in-depth exploration of the ERP implementation process, by exploring the experiences of change agents employed to coordinate the introduction of a new ERP at three UK hospitals. Building on the programme theories developed from my realist synthesis, I aimed to test and refine these by conducting a detailed exploration of the implementation process *in situ*. I conducted this research within the context of the PERFECTED research programme, based at the UEA, and I designed my study to make best use of the available resources and opportunities available, in order to address my research aims.

In section **3.2** I present the conceptual framework underlying my approach to the study, building on the assumptions set out in section **1.4** regarding realist evaluation and scientific realism. In section **3.3** I give a detailed account of how I designed my study, including a thorough rationale for how these methods would address my research question, a description of the practical challenges I encountered, details about the types of data I intended to collect, and how I intended to analyse this data. Finally, in section **3.4**, I will discuss the issue of quality assurance, and how I intend to demonstrate research rigour throughout my study.

3.2 Conceptual framework

I decided early on in my research process that my research aims would be best addressed via a realist evaluation approach (as described in **section 1.4**). My initial literature review (**Chapter 2**) was conducted using realist synthesis, underpinned by "scientific realism" as defined by Pawson and Tilley (1997). For my empirical study, I decided to use qualitative research methods, and I present a full rationale for why I decided this would be the most appropriate approach in section **3.3**. When conducting qualitative research, a thorough consideration of the researcher's philosophical stance is central to the investigative process, as it provides context and understanding to meaning making. As

such, in this section I will outline and explain my ontological and epistemological perspectives prior to designing and conducting the research proper.

The current prevailing philosophical stance in qualitative research (particularly in psychological research, which is my primary discipline) is one of constructivism, i.e. that individuals construct meaning of the world through their own subjective experiences. The implicit assumption in this approach is one of relativism, i.e. that there are multiple realities, each constructed by an individual's experience of the world, as influenced by their own subjective context and perspective (Willig, 2016). However, although qualitative research predominantly asserts that we come to understand the world through our subjective experience of it (relativist epistemology), this does not necessarily imply that there is no independent reality which we share. In fact, to deny the existence of an objective, independent reality renders the process of meaningful insight via research impossible (Shadish, 1995; Ashman and Barringer, 2005). To posit an ontologically relativist stance is to suggest that the researcher is only ever able to present their own subjective experience of the world. Without some degree of realism, we have no shared points of reference and are unable to contribute wider insight on the phenomenon of study within a broader social context. In order to say anything meaningful about the world that we share, we have to assume that there is world that we share (Matthews, 2014). Without this assumption of a shared objective reality, no meaningful commentary about these subjective experiences can be made, as any interpretation of another's subjective experience dissolves into a meaningless, unending cycle of subjective reinterpretation, i.e. a subjective interpretation of another's subjective experience. As a result, in order to conduct research, as opposed to simply describing or story-telling a single, subjective narrative (or, the researcher's subjective experience of the experiences of others, which will then be reinterpreted by readers and have a further, different meaning), we must assume that there is, to some degree, an objective reality which we all share, even if we experience this in unique ways.

Willig (2016) argues that even the most adamantly relativist researchers subscribe to an underlying realist ontology. Although qualitative research traditionally aims to provide a sympathetic and rich description of the experiences of specific individuals, groups or events (Denzin, Norman K. Lincoln, 2005; Sutton and Austin, 2015), it does this with the implicit goal of saying something more generally about the phenomenon of study (Glaser and Strauss, 1966; Braun and Clarke, 2006), often by highlighting critical contextual factors that impact outcomes, or by identifying transferable concepts. This is not possible without an admission that there exist objective points of reference, outside of our own subjective experience, that we all share, even if we cannot access or describe these directly. This approach has, to a different extent, already been adopted by the majority of researchers using "traditional" scientific approaches: the recognition that we need to separate ontology (reality and

the objects of our investigation) from epistemology (how we come to know and describe them) has been discussed in depth by proponents of critical realism (Bhaskar, 2013).

With this in mind, I have designed and conducted the following research adopting the critical realist stance as suggested and defined by Willig (2016). Although the participants in my study constructed their own subjective reality based on their individual experiences, context and background (i.e. relativist epistemology), the conclusions I ultimately arrived at were based on the underlying assumption that we ultimately share an objective reality (ontological realism). My own description and interpretation of the SILs' experiences are themselves constructed by my own relativity, and any reader appraising this interpretation would then provide their own subjective interpretation of that narrative. The assumption that there is an underlying, fixed reality that we all share (i.e. that we share objective points of reference) is compatible with the belief that how we experience and conceptualise that reality is shaped by our individual experiences and perceptions. By adopting a critical realist perspective, as a researcher I accept that although any conclusions I reach through my research process are not definitively conclusive about the subject of study, they provide a "best fit" for understanding the phenomenon of study, and provide realistic and workable recommendations allowing policymakers to adopt an informed approach.

This framework complements my subject of study well, as the ERP protocol provided to the SILs was an objective reference point that they all shared, but the way in which they enacted the changes required was ultimately shaped by their own subjective experiences. Each SIL's background, local context, complex network of relationships and expectations of the pathway influenced their meaning making, and their resulting approach to the role. A critical realist perspective also complements Pawson and Tilley's "scientific realism" well, the implication being that while we may not be able to fundamentally understand the way in which an intervention might be enacted in every conceivable situation, we can develop a "working understanding" that makes pragmatic decision making possible and meaningful. I argue that adopting a stance of critical realism is not only appropriate but also necessary when conducting this type of research and appraising the resultant data. My interviews with the SILs as agents of change, and the ethnographic data collected by the PERFECTED research team, served as means by which I accessed my participants' individual experiences of the ERP implementation process. As a researcher, my subsequent analysis of these data sought to make sense of these diverse perspectives, distilling otherwise disparate narratives in order to provide meaningful interpretation and specific recommendations for clinicians and policymakers (Smith and Elger, 2014; McLachlan and Garcia, 2015). Through research and analysis, the subjective realities of temporary actors are transformed into the shared experiences of members of a wider community, with broadly collective goals.

3.3 Designing the study

In this section, I will discuss how I began designing my empirical study in order to address my research questions, including highlighting practical challenges I had to take into consideration. I will then outline the context of PERFECTED WP2 (with which my research was aligned) and how this influenced my study design. Next, I will explain my decision to involve the change agents as "key informants" to my empirical study, and how I intended to use primary interview data alongside ethnographic data collected by the PERFECTED research team in order to address my aims. I will then outline my experiences of acquiring appropriate ethical approval, some of the challenges this process involved, and how this impacted my study. Finally, I will give an explanation of, and rationale for, my choice of analytic approach.

3.3.1 Addressing the research questions

My main objective was to provide a rich description of the process of implementing a new ERP in UK hospitals. Central to this process are the staff, affected by the changes necessary to achieve implementation success, and the appointed change agents tasked with coordinating this process. As highlighted in my realist synthesis, existing literature focuses predominantly on the outcomes of ERP implementation, and the level of adherence achieved. The lived experiences of hospital staff are largely overlooked, but may provide valuable insights into why ERP implementation is often challenging, and develop a better understanding as to how barriers to implementation might be better addressed in practice. In keeping with my approach of realist evaluation, I aimed to explore how the different contexts, resources and circumstances, present in each setting, affected staff behaviour and decision making, and how in turn this influenced the degree of implementation success.

Following the completion of my realist synthesis, I began to develop my empirical study of ERP implementation in practice. I had been designing this study since the start of my PhD process, as I was aware that I would be working within the timeframe of PERFECTED WP2, and needed to secure ethical approval before being able to collect any data, so I knew I needed to get this process moving early on. Through this description, as well as the personal reflections I will provide about my experiences, I aim to demonstrate why the methods I used were the most appropriate for addressing my research aims, and give some insight into my decision-making processes. A summary of the methods I used in this study is given in **Chapter 4**.

In order to explore the implementation process from start to finish, I decided that an in-depth, qualitative study, interviewing participants at various time-points, would be appropriate. Because PERFECTED WP2 involved a twelve-month action research period, I aimed to collect my data across

this twelve-month period so that I could observe the changes in participant perceptions, behaviours and attitudes. I wanted to be able to demonstrate that different staff members, from different staff groups, in the three hospital sites, approached the change process with different priorities and motivations. I considered collecting data via a number of different sources, to provide a rounded and multi-perspective description of the implementation process, combining interview data (participants' insights prompted by my questions) with ethnographic data (participants' and researchers' observations taken within a naturalistic setting).

3.3.2 Practical challenges

As I intended to conduct my empirical research within the context of a larger, established research project (PERFECTED WP2), I was aware that I had to make pragmatic decisions and minimise the delays in starting my study. PERFECTED was a large, multi-site project, and as such was following a complex and pre-planned timeline. When I began my PhD project in April 2015, PERFECTED WP1 (consolidating existing research into hip fracture care for people with dementia) was close to concluding, and WP2 (a twelve-month action research process, trialling and developing the initial PERFECT-ER pathway in three UK hospitals) was scheduled to commence in October 2015. In order to map the implementation process from start to finish, I aimed to begin collecting data concurrently with this date. This time-pressure presented me with a number of practical challenges, as not only did I have to design the study I wanted to conduct (following a thorough literature review to better inform the aims of my research), but I would have to gain appropriate ethical approval before I could start collecting data. The challenges and delays I encountered whilst trying to obtain ethical approval for my study are discussed in more detail in section **3.3.7.**

ERPs represent a multimodal approach to surgery, in that they address all aspects of the surgical pathway, from pre-admission through to discharge and recovery. By incorporating all elements of a patient's surgical journey into one, joined-up approach, ERPs aim to ensure smooth transition between the different phases of surgery, resulting in improved patient experience and outcomes form surgery. Successful ERP implementation requires ERP adherence from all staff groups involved in any stage of the surgical pathway, which includes healthcare assistants, nursing staff, surgeons, anaesthetists, but also domestic staff such as cleaners, cooks and hospital porters. As such, the implementation of PERFECT-ER would involve a number of different staff groups, with differing professional backgrounds, personal perspectives and priorities. Capturing these various experiences in sufficient detail, in order to provide meaningful insight into context and circumstances, presented me with significant challenges in designing my study.

At first, I considered conducting focus groups and semi-structured interviews with a cross-section of ward staff from these different disciplines, at each hospital site. I hypothesised that this approach

would provide insights into the different perceptions of the ERP and its implementation, from the perspectives of different professional groups. I felt these insights would be valuable in understanding why certain elements of ERPs tend to not be implemented successfully, and suggest how these barriers to implementation could be addressed in future. Each staff group, having different areas of expertise, priorities and areas of focus, would conceptualise the pathway in different ways. By interviewing them individually, I aimed to access their different narratives, providing a rich and multi-faceted description of the implementation process, as experienced by the stakeholders enacting it. The focus groups would provide a method of exploring the multidisciplinary interactions, and give insight into collaborative working and group problem solving towards the common goal of pathway implementation.

However, following a discussion with the PERFECTED PI based at the UEA, I realised that this design was not practical within the time and resources I had available. Regarding my proposed participants, I appreciated that ward staff have busy working lives, working long and often unsociable shifts, and it would be challenging to negotiate suitable times for interviewing. Pragmatically, there were certain time and funding limitations on the proposed design of this research. As a single researcher with limited studentship funding, there was only so much ground I could cover with the resources available to me. The ward staff would not be reimbursed for their time by the PERFECTED research programme, and I did not have the resources to offer reimbursement as an incentive to participate in interviews or focus groups. As such, recruiting a sufficient number of participants, willing to give up their time for research purposes, would be difficult.

I also had to consider the challenges of geographic distance, with the partner hospital sites up to 200 miles apart. I had to give serious consideration as to how I would manage my time and traveling but still be able to collect sufficient, quality data to address my research aims. One of the ways I had considered managing this was to arrange multiple interviews in the same day, reducing the number of times I would have to visit each site. However, successfully arranging multiple interviews with a range of staff members within a single day, multiple times across the twelve-month research period, for all three hospital sites, would not only be challenging (if possible), but also mentally demanding on me as the interviewer.

> Reflections from the time (from my notes):
> *It's very difficult to work under the umbrella of an existing research programme. By the time I had enrolled to do my PhD, PERFECTED was already 2years established. It took a considerable length of time to get to grips with what was actually happening in the project, and how my project might reasonably align with it. I suffered much frustration, false starts,*

confusion, dead ends and feel I wasted considerable time and effort drafting plans which were later dismissed as not practical, or realistic, or appropriate to PERFECTED's larger aims. An honest appraisal of the situation came 6 months in, when I was given practical advice to streamline the ethics process, and a large part of my proposed methods written off as "hugely unlikely".

Although I found this frustrating (as shown in the reflective notes I took at the time, given above), in retrospect I appreciate the honest feedback from the PERFECTED team, as this mitigated potential issues later, and helped me to reconsider my aims and how they might best be achieved. I considered the resources that were available to me, both in terms of data I could collect first hand and the data that was being collected by the PERFECTED research team for the purposes of WP2, and how I might maximise potential data collection opportunities.

Bearing in mind these practical challenges and my research questions, I needed to adopt a research methodology which would:

- Be practical within the time and resources available to me
- Be prospective, in that I could explore the process of implementation as it was happening
- Capture detailed information about the implementation strategies used, and the contexts in which they operated
- Explore the experiences of participants, reflecting on the challenges they faced throughout the process, and how they negotiated these challenges

Studying the implementation process, particularly of a multimodal pathway such as an ERP, poses unique problems to researchers. Not only is there an inherent complexity to the pathway researched (in that it incorporates a large number of elements across a broad range of disciplines), but I also had to consider the fact that the pathway being introduced in PERFECTED WP2 was still under development, i.e. throughout the WP2 process, SILs provided feedback from their action-planning meetings about which elements of the pathway were problematic, and the PERFECTED research team amended or developed the pathway where necessary and appropriate. Because the pathway was still under development, the specific elements of PERFECT-ER were subject to change, adding a degree of uncertainty to what was expected of the ward staff: changes to ERP elements (e.g. specificity on the ERP checklist, how adherence for an item was measured) could result in a fall in adherence scores from one audit to the next. Not only would this have implications for the perceptions, expectations and motivation of ward staff, but these challenges would not usually be present in other ERP implementation efforts, where traditionally the ERP is introduced once a final working pathway has been designed before its introduction.

Due to the nature of PERFECT-ER, which was designed to address the specific needs of an under-researched patient group, this ongoing pathway development (through an action research approach) was necessary. However, taking this into account, capturing appropriate data and analysing it in such a way that provided meaningful insight into the process of ERP implementation more general, presented me with further challenges. In addressing these, adopting a realist evaluation approach was particularly practical due to its flexibility and exploratory nature. Unlike traditional methods of process evaluation, which tend to focus on the aggregation of data supporting a proposed theory concerning the intervention under investigation (Hewitt, Sims and Harris, 2012; Salter and Kothari, 2014), realist evaluations have an explanatory focus, seeking to unpick why and how certain interventions work under certain circumstances, not in others, and why they might still work to a certain extent in completely different circumstances, owing to a different set of generative mechanisms (Scriven, 1994; Pawson and Tilley, 1997). Rather than using this research to develop a generalised theory of how ERPs can be implemented in practice, I aimed to capture data which could make sense of the process of implementing a complex intervention into complex settings.

Through an explorative, realist enquiry into the implementation process, I aimed to develop a better understanding of the critical contextual factors which triggered (or prohibited) generative mechanisms, resulting in (or preventing) desired outcomes. By aligning my project timeline with that of the PERFECTED research team and working alongside researchers on this project in a collaborative fashion, I was able to maximise my access to meaningful data related to the ERP implementation process, giving a rich description of that process, and a multifaceted understanding of the contextual factors which influence implementation success. I was later able to use these insights to provide practical feedback to the PERFECTED team, informing the design of later stages of their research project.

3.3.3 Working within the context of PERFECTED

I designed my research with an aim to provide an in-depth exploration of the implementation of a new ERP in UK NHS hospitals. I aligned my study with PERFECTED's Work Package 2 (WP2), the feasibility trial of the ERP (described in detail in section **1.2**). In this phase, an early draft of a new ERP, specifically designed to address the needs of hip fracture patients with dementia, was implemented in three UK hospitals. Each hospital appointed a Service Improvement Lead (SIL) to act as the change agent and key coordinator for the ERP implementation process.

By the time I had started my PhD, the PERFECTED WP2 protocol had been fully designed, and there was little opportunity for me to influence any changes. However, I had the opportunity to attend PERFECTED management meetings, which aided my understanding of the project aims and timeline. These meetings afforded me a forum to discuss my research objectives with the wider PERFECTED

research team, and prompted ideas for data collection and analysis opportunities. As I was a named researcher within the PERFECTED research team, I was able to access data collected as part of the wider project, and I began to appreciate how the audit and ethnographic data for WP2 might also be useful in addressing my own research questions. Rather than be disheartened by the practical challenges I was faced with in designing my study, I realised that working within the context of PERFECTED WP2 gave me an opportunity to work collaboratively with a multidisciplinary research team, and that by working alongside PERFECTED, my study could be granted ethical approval via a substantial amendment to the existing PERFECTED WP2, to use data collected there for secondary analysis in my own study. At this stage, I began to explore how the research aims and data collected specifically for PERFECTED might also be useful in addressing my own research questions. Following further discussion with my supervisory team and the UEA PERFECTED PI, I revisited the main conclusions from my realist synthesis. The WP2 process involved both the use of a dedicated change agent, and a staff consultation process, as strategies for implementation. I considered the role of the coordinating change agent within the process of implementation, and decided that these individuals could provide a unique and valuable insight into the implementation process. In the context of PERFECTED WP2, a change agent (known as a SIL within the PERFECTED research programme) would be appointed at each of the hospital sites for the duration of the twelve-month research process. The role of the SIL would be to co-ordinate the implementation of the ERP within their hospital, and to act as co-researchers within PEFECTED WP2, collecting audit data, observations and field notes about the process. I decided that a combination of repeat-interviews with the SILs, and secondary analysis of the data collected by PERFECTED researchers for WP2, would be both more practical and appropriate in addressing my research questions, than the initial design I considered in section **3.3.1**.

3.3.4 The role of SIL as change agent

The SILs would act as primary change agents for the PERFECTED ERP (PERFECT-ER), and would be in post for the entire twelve-month research process (assuming they did not choose to leave the post). They would be key decision makers, co-ordinating implementation of the pathway within their hospitals, and would communicate with a broad range of staff groups. As they were employed specifically for this role, their primary concern and focus was the pathway, and they would have the opportunity and flexibility to arrange repeated meetings with me for interviews. For this reason, I identified the SILs as "key informants" to understanding the implementation process from an inside perspective (Gilchrist and Williams, 1999; Hawe *et al.*, 2004). Key informants are typically described as individuals who have an in-depth and broad understanding of the workings of a specific community or setting. The unique position of the SILs meant that they were involved in the implementation process both as researchers, and staff situated within the ward. Their specialist

knowledge and experience of the process would be particularly useful in developing my understanding not only of ERP implementation as a whole, but also specifically how their particular contexts influenced staff decision making and implementation outcomes.

At the start of the research period, each SIL was tasked with collecting baseline data about their ward, to ascertain to what extent elements of the PERFECTED pathway were already in place as part of usual care. This included checking details about their specific organisation, for example was there existing hip fracture policies in place, did their Trust have strategies for patient identifiers, did their Trust have specific safeguarding policies for patients with cognitive impairment, and so forth. During this time, the SILs also had the opportunity to get accustomed to the running of their ward, and get used to conducting ward observations as a co-researcher. The SILs kept ethnographic field notes and reflective notes about this process, and had the opportunity to discuss any issues with the PERFECTED research team.

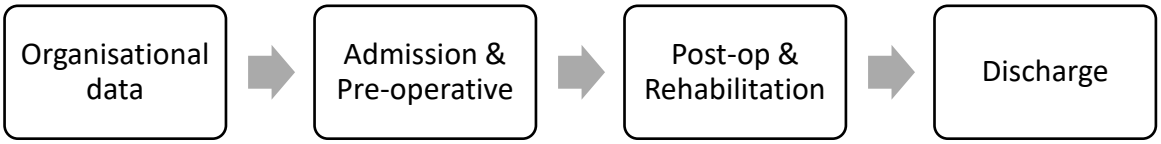

Figure 4. Indicative PERFECT-ER outline

Once the baseline data was collected, SILs began the process of formally implementing PERFECT-ER on their wards, and used whichever strategies to implement change they felt most appropriate. PERFECT-ER is a multi-item pathway, comprised of evidence-based and expert-informed elements addressing all stages of patients' surgical journey, from admission to discharge and recovery (Hammond *et al.*, 2017); an outline of the main elements covered by PERFECT-ER is given in Figure 4. This pathway was then translated into a checklist, to be used by the SILs as part of their ward audit process, at set stages throughout the research process. This was a multi-item checklist, which the SILs completed for ten patients cared for on their wards, for each audit cycle. Checklist items included items related to admission and pre-operative care, post-operative care and rehabilitation, and patient discharge from hospital.

To assess pathway adherence and aid the ongoing implementation process, SILs were required to complete five audit cycles across the research period. These consisted of a completion of the ERP checklist (which assessed to what extent pathway elements were being adhered to), followed by a multidisciplinary "optimising care session", or "action-planning meeting", where SILs presented the results of the checklist, and worked collaboratively with staff to plan how the results could be

improved ahead of the next audit cycle. By completing the checklist at different stages throughout the ERP implementation process, the SILs and the PERFECTED research team were able to discern to what extent the ward staff were adhering to the pathway as prescribed, and to what extent different elements had been successfully implemented into routine practice. These ward audits were not designed to assess the individual performance of staff, but to identify any potential barriers to implementation, and how these might be overcome. Certain elements of the pathway were concerned with organisational structure and available resources (which would inevitably vary between the three sites). Changing these would require an understanding of tacitly accepted, local practices (which may not necessarily be specified in formal policy or procedures), in order for these to be changed and actioned to meet the PERFECTED recommendations. Given the nature of the changes, I anticipated that these elements would be more complicated and time-consuming to implement, and present challenges to the change agents and ward staff.

Other elements of PERFECT-ER were directly related to the actions of hospital staff, and in order for the required changes to be implemented, the SILs would have to work with staff to directly affect and influence their behaviour. How they achieved these necessary changes was essentially down to SILs' own preference and approach, and would rely on their ability to identify and manage challenges, complex relationships within and between ward teams, and make use of available resources. How they approached these challenges would depend on their existing experience and knowledge, relationships with staff, and personal skills such as person management. By repeat-interviewing the SILs across the twelve-month implementation process, I aimed to uncover the different challenges they encountered when trying to influence ward staff behaviour, and discuss with them the ways in which they overcame these challenges. Where different SILs encountered similar challenges, I hoped to explore how their different backgrounds influenced their approach to problem-solving. I would also analyse ethnographic field notes and observations collected by PERFECTED researchers and by the SILs themselves, to explore the SILs' interactions with different ward staff, and how they approached group working in an effort to achieve their implementation aims.

One of the forums for group-working was the action-planning meetings SILs arranged as part of their role within WP2. Following each checklist audit cycle, the SILs had to arrange for an "optimising care session", or "action-planning meeting" (these terms are used interchangeably, but I will predominantly refer to them as "action-planning meetings"), to be held on their ward. The format of these meetings varied depending on the SILs' preferred ways of working, but for the most part, they invited a broad range of ward staff, from a variety of disciplines, to discuss the results of the most recent audit, and plan together how to build on this. The meetings tended to involve SILs giving

a brief presentation about the results of their audit, highlighting any areas which scored particularly highly or poorly, and discussed the possible reasons for these. For elements which had scored poorly, SILs and ward staff discussed together any potential barriers to implementation, and worked collaboratively to problem solve and plan for future improvements. At each of the action-planning meetings, a member of the PERFECTED research team was present to observe and take field notes of the process, who was present, what was discussed, and how they perceived the dynamic of the discussion.

The PERFECT-ER implementation was a two-way process, as SILs had the opportunity to feedback and discuss their views of the pathway directly with the research staff who had constructed it. Following each action-planning meeting, the SILs may have uncovered specific issues with the way certain elements were presented on the checklist, or required clarification regarding required standards. In this regard, PERFECT-ER was an evolving document, which researchers and clinicians worked collaboratively to construct iteratively throughout the WP2 research process. By the end of the twelve-month research process, the aim was not only to have developed the finalised pathway for the next stage of the PERFECTED research programme, but also to have implemented it in the initial three trial hospitals as fully as possible, with an eye towards long-term sustainability. My aim to explore the process of implementation and important contextual differences which influenced change also supported the PERFECTED research team in developing specific implementation strategies for the next phase of their project.

The SILs were neither exclusively members of ward staff, nor full members of the PERFECTED research team. They fulfilled both roles to a certain extent, having an awareness of the inner workings of the research process, its aims, and its evidence base, but also a familiarity with the everyday workings of the hospital ward. The responsibilities of their role meant that they would have a good overview of the entire implementation process (rather than a specific insight as provided by one staff group, for example a staff nurse would have insight into only those aspects of the pathway they were involved with), and they would have an in-depth understanding of the challenges present in introducing a new pathway such as PERFECT-ER. Because of this, I hypothesised that they would be able to appreciate the bigger picture, and give unique insight into the process of putting research into practice. Their clinical experience and in-depth knowledge of their own hospital meant that they would be able to identify when certain desired changes would not feasible, and in other cases, would be able to work collaboratively with ward colleagues to formulate practical solutions to barriers to implementation.

As the SILs would be directly involved with the implementation process throughout the entire twelve-month research process, employed under a fixed term contract specifically for the purposes of PERFECTED WP2 (unless for some reason they decided to leave their post early), they would also have a greater degree of flexibility in order to take part in any data collection activities I arranged. From a purely practical perspective, this would considerably decrease the burden on me as a sole researcher. As the SILs would be employed as part of the PERFECTED research programme, consideration of reimbursement for time and travel for these participants was no longer an issue.

From a data collection perspective, the SILs would be available for repeat interviews throughout the implementation process. This would help me in constructing a consistent narrative for each hospital site, as I would be able to access an in-depth insight into the perspectives of a consistent narrator and explore their perception of change and development over time (Thomson and Holland, 2003). A repeat-interview approach such as this is particularly useful when documenting change over time, as it not only allows participants to self-reflect on previous events and interviews, but as a researcher it could provide me with opportunities to tailor subsequent interviews to ask follow-up questions regarding on-going issues (Vincent, 2013). Although this approach is typically used in qualitative longitudinal research (which tends to cover a much longer time-frame than the twelve-month process of PERFECT-ER's implementation), these advantages mean that repeat-interviewing is ideally suited to exploring process implementation in an action research programme such as PERFECTED.

By exploring the experiences of the SILs as change agents, I aimed to provide an in-depth exploration of the ERP implementation process, as experienced and conceptualised by the individuals at the centre of that process. Being both co-researchers on the PERFECTED research project, and integral members of ward staff co-ordinating the pathway's implementation, the SILs had a unique insight into the process, able to provide an overview both from a ward and a research perspective. I did not aim to provide a generalised picture of what the implementation process involves, but report three specific experiences within particular, complex contexts. By comparing and contrasting the implementation experiences across the three wards, I hoped to highlight specific circumstances or contextual factors which influenced or impacted implementation success. The opportunity to discuss specific challenges with the SILs, at the time they were experiencing them *in situ*, would provide me with a better understanding of how different local, group, and individual contexts influence generative mechanisms and eventual implementation outcomes. By conducting in-depth, individual interviews with the SILs, I had an opportunity to gain insight into the way that they conceptualised their role, their different approaches to the implementation process, and the various ways that they engaged with peers and colleagues from a broad range of disciplines and backgrounds, both in their hospital and as part of the broader research team. I did not aim to capture an objective or

generalised picture of the role of SIL, or the ERP implementation process, but to give a clear and coherent account of their individual versions of these, acting within specific, complex contexts. By developing a better understanding of their individual contexts and process of meaning making, I could further develop my programme theories from **Chapter 2**.

However, there are limitations to relying solely on semi-structured interviews with participants as a means of understanding their experiences, particularly in the context of a complex intervention such as this. Although I intended to interview the SILs about their ongoing experiences of the implementation process (i.e. I was interested in what their perceptions and attitudes were at the time of interview, minimising retrospection), the setting of a formal interview by its very nature decontextualises the experiences under discussion (Huot and Laliberte Rudman, 2015; Braun, Clarke and Gray, 2017). Interviewing participants can only provide insight into their specific perspective of a process, and the interview process can often present a biased perspective. Participants may present their views in a "favourable" way, telling the researcher maybe what they think they want to hear, glossing over the details that may present them in a less favourable light, and focussing on issues they personally see as important. The interviewer could potentially mitigate against this slightly by re-focusing the discussion, and prompting to explore a specific area of interest, but ultimately the qualitative interview presents the participant's specific perspective. This is useful in research specifically exploring the lived experiences of its participants, but I wanted a broader understanding of the whole implementation process. The SILs were an integral part of this, but not the only component.

3.3.5 Secondary analysis of qualitative data collected for PERFECTED WP2

As a named researcher on the PERFECTED research programme, I was able to access qualitative data collected by the wider PERFECTED research team, which included ethnographic field notes, observations and reflective notes taken by both the SILs and PERFECTED researchers from the UEA. Following a substantial amendment to the existing ethical approval for PERFECTED WP2, I was able to use these data for secondary analysis in my own research. This was particularly useful for two main reasons: firstly, from practical point of view, it allowed me to map the entire implementation process from start to finish. This may not have been possible if I had relied on semi-structured interviews alone, as acquiring ethical approval resulted in delays in data collection (this is discussed in more detail in sub-section **3.3.7**). It also meant that I had access to greater data resources, without having to arrange extra data collection myself, which was an important consideration given my limited time and resources.

The second advantage to using the PERFECTED data was from an analytical standpoint: data collected via semi-structured interviews can provide in-depth interrogation into a participant's

perceptions of a particular incident or experience, and the interviewer can use tailored questions and prompts to illicit discussion around their focus of interest (Knapik, 2006). However, as explained in the previous sub-section, the interview environment decontextualises the phenomenon of study (i.e. the SILs would be reflecting on previous experiences, outside of the naturalistic environment of the ward), and presents a single subjective perspective of the process of implementation, coloured by the individual SIL's priorities, context and focus. Therefore the insight into the broader context of ERP implementation would be biased by their specific perspective presented within the interview context. However, by combining the findings from my semi-structured interviews with data collected by the PERFECTED research team, I was able to gain a richer insight into the implementation process. This included observations and reflective field notes collected by the SILs themselves, which were particularly interesting as these highlighted key concerns and motivations for individual SILs, without my influence as a researcher giving specific prompts. Ethnographic field notes and reflections on the action-planning meetings, collected by the PERFECTED research team, provided alternative perspectives on this process, with a specific focus on addressing PERFECTED research aims. These were also valuable in addressing my research questions, as they provided a detailed description of the action-planning process, commenting on the interrelations between the SIL and the ward staff they worked alongside, from a more detached perspective. Although no qualitative data collection can provide a completely unbiased, objective account of any event or context, these field notes allowed me to gain insight into the implementation process that I would not have been able to access through participant interviews alone. PERFECTED researchers also concluded their field notes with critical reflection on what they had observed and how they had recorded this (Maharaj, 2016), which aided me in conducting an informed analysis.

Despite these advantages, I had to consider some of the inherent disadvantages to conducting secondary analysis on these data. Secondary analysis of quantitative data is now common practice, but for qualitative research this is less common due to debates regarding its appropriateness (Morse, 1994; Hinds, Vogel and Clarke-Steffen, 1997). However, although the aims of my research were distinct from the overall aims of PERFECTED WP2, they were still concerned with exploring the process of ERP implementation, and therefore were similarly aligned. In this regard, I was confident that secondary analysis of the PERFECTED WP2 research data was an appropriate part of addressing my own research questions. I had become familiar and fully immersed in my interview data partly through the data collection process: firstly through the act of conducting the interviews myself, but also through the lengthy transcription process. In order to ensure the same level of familiarity and rigour when analysing the PERFECTED dataset, I had to work proactively to immerse myself in the text to the same degree. This included attending a cross-section of the action-planning meetings

myself, in order to informally observe how each SIL typically conducted these meetings, and how each PERFECTED researcher subsequently recorded this in their notes. Although each researcher had their own particular style of note-taking, they were all experienced qualitative researchers, with agreed methods of working and shared research aims, and their resulting data was of a consistent style and quality. In terms of analysing the data, I applied the same methods of thorough re-reading and cross-referencing between data items to ensure rigour and consistency.

3.3.6 Ethics

My main ethical concern was that the SILs, being employed as co-researchers on the PERFECTED project, might feel coerced or obligated to take part in the interviews for my study, and that should they choose not to participate, this might negatively affect them or their work. To counter this, I made it very clear on both the Participant Information Sheet (Appendix 2) and Consent Form (Appendix 3) that they were under no obligation to take part, and could withdraw at any point without having to give any explanation. I also reiterated this verbally every time I met with them for interview, and provided them with contact details for my primary supervisor and the PERFECTED principal investigator at the UEA, should they want to discuss any aspects of my study with a third party. A potential issue with this was the fact that two members of my supervisory team were also key members of the PERFECTED research team, and the SILs may not have felt confident in approaching them to discuss any issues concerning my research conduct. This was further complicated by the fact that the SILs may have assumed that my PhD research was directly connected to the PERFECTED project. I tried to mitigate against these issues by reminding the SILs that my research, whilst conducted within the context of PERFECTED, was a separate research project in its own right, and they could discuss any issues related to my research with my supervisory team. I made every effort to keep an open and friendly dialogue with the SILs throughout my interactions with them, reassuring them and addressing any questions or concerns that they had.

I was also concerned about issues of confidentiality. As my research involved a very small group of participants across three partner hospitals, I was aware that there was the possibility they may have been identifiable through my reporting. They occupied a specific role, and their experiences and context would be described in good detail, in order to provide the necessary contextual detail to inform my analysis. In order to minimise this risk, I provided details in my Participant Information Leaflet (Appendix 2) regarding how the data would be collected and used. I specified that data would be anonymised, and stored securely in line with the Data Protection Act (1998). Where quotations would be used in my analysis, real names would not be provided, and I would make every effort to ensure these would not be traceable back to individuals. When meeting with the SILs, I frequently reminded them of this, also explaining that any identifiable information they provided (such as

reference to other individuals they mentioned in interview) would be anonymised. I collected only basic demographic information, where relevant to informing my analysis (i.e. professional background, years' experience).

When describing the partner sites, it was necessary to provide enough contextual information to inform the reader about specific local issues which could impact implementation. However, I discussed these concerns at length with my supervisory team, and decided that it was possible to provide the salient information in a way that didn't make each site readily identifiable (i.e. rather than specify the region of the UK in which each site was located, state the approximate size of the hospital, and whether it was situated in a rural or urban location).

As a further consideration, I realised that when I came to writing up findings for publication in academic journals, there was the potential that the SILs may intend to read these, and be able to self-identify from the reports. As such, I intend to undertake "member checking" prior to submitting these articles for publication. This involves inviting the SILs to read through my manuscripts, giving them the opportunity to provide feedback about any issues or concerns they might have about my interpretations of the data, and how they are represented in the final reports.

3.3.7 Obtaining ethical approval

The process of acquiring appropriate ethical clearance for my main study was not straightforward, but having previous experience of navigating the NHS ethics process (through previous research projects and from being a research ethics board member whilst being an NHS employee), I thought I had been adequately prepared for challenges and potential delays. I knew that the administrative process would be laborious and would likely require a number of drafts before the proposal was accepted. However, what I hadn't been prepared for was the lack of clarity in how to obtain appropriate ethics clearance for this particular project. As I was working with participants employed as part of a larger research project, which was already in progress and had NHS REC approval, it was unclear how to proceed to acquire suitable ethical approval for my own project.

Following a discussion with my supervisory team, the PERFECTED research team, and the UEA internal Ethics Committee, I drafted my research proposal, compiled supporting documentation and attached a copy of the PERFECTED WP2 protocol (as my study would be running alongside WP2, I was advised to include this by the ethics committee). I then submitted these documents to the UEA's Ethics Committee for their consideration (see Appendix 4). This first draft was rejected (see Appendix 5), with "a number of concerns" highlighted by the committee and request for a full resubmission. Although I had expected a need for amendments before my proposal was accepted, I found the requested changes frustrating, as there were only two (in my eyes) fairly minor

clarifications to be made (one relating to an incorrectly labelled appendix, and the other regarding ambiguous wording on the Participant Information Sheet). I had hoped that maybe my proposal would be accepted on principal, pending these fairly minor and easily adjusted errors, however I was asked to submit the amended proposal in full, for consideration at a future meeting of the ethics committee. By this point, the SILs were already in post and delays to my proposal being given ethical approval meant delays to conducting my first round of interviews, which I found very frustrating. As my research aimed to explore the whole process of ERP implementation, from initial introduction through to the withdrawal of a formal change agent, this delay limited the opportunities for me to collect this early data. I appreciated the need for a thorough consideration of the ethical implications of my research activities, but this delay meant that I had to reconsider how I would best address my research questions via the data collection opportunities available to me.

I submitted the amended research proposal to the UEA Ethics Committee (10/11/2015), but the next day received an email back from one of the committee members stating that my proposal should be included as a substantial amendment to the existing PERFECTED WP2 protocol, and not as a separate project through the UEA Ethics Committee. I found this especially frustrating as I felt this could have been flagged up a month prior, before I had prepared a proposal and supporting documentation for the internal ethics committee. I felt that this month delay was a setback that could have potentially been avoided. However, in retrospect, I appreciate that as my PhD research was conducted within the context of a larger, established research project (in this case, PERFECTED), there was an overlap in where responsibility for ethical approval ultimately lay, and this grey area could only be resolved through thorough consideration from the REC. Once this had been clarified, and I began to seek ethical approval via a substantial amendment to PERFECTED WP2, I could consider how to mitigate against the data collection opportunities missed due to this delay. Conducting my research within the context of a larger research project meant that I didn't have any influence in terms of delaying the start of the implementation process, but it did mean that I could address my research aims through the secondary analysis of other data, collected by the PERFECTED research team. Although not what I had initially planned, given the circumstances this was a pragmatic solution.

Following further discussions with my supervisory team and the UEA PERFECTED PI, I prepared the appropriate documentation for a substantial amendment. These were then vetted by the UEA Research and Enterprises Services Contracts Manager for the Faculty of Medicine and Health Sciences (09/12/2015), and over the Christmas break (an inevitable but additionally frustrating lull in progress) I made the recommended changes to my supporting documentation. Meanwhile, I received written confirmation that a substantial amendment via the National Research Ethics Service (NRES), without separate UEA Ethics Committee approval, would be sufficient for my study

(05/01/2016). Following some final recommended changes to my documentation (15/01/2016), I submitted the documentation, as a substantial amendment to PERFECTED WP2, to the NHS Health Research Authority, South Central – Oxford C REC for their consideration (receipt acknowledged 08/02/2016). Following a sub-committee meeting, the substantial amendment was accepted in full on 15/02/2016 (see Appendix 6), and I could proceed with data collection. By this point, the SILs had been in post for five months, and as such this delayed my first round of SIL interviews (which I had intended to conduct at the start of their time in role). However, with ethical clearance to conduct a secondary analysis on the ethnographic data collected for PERFECTED WP2, I was able to construct a complete picture of the whole implementation process.

3.3.8 Analysing the dataset

As explained in the preceding sections, I decided to address my research questions through a combination of exploratory, qualitative methods. My dataset consisted of ethnographic field notes, observations and reflections collected by the PERFECTED research team and the SILs, and in-depth interviews which I conducted with the SILs at different timepoints throughout the implementation process. I aimed to explore the implementation of PERFECT-ER, using the SILs as key informants to gain a rich insight into that process. This allowed me to explore my participants' experience of ERP implementation, including the challenges they faced and how they conceptualised this process, in their own words. Such objectives are ostensibly better suited to qualitative research methods, which allow researchers to capture in-depth and nuanced details about phenomena which are challenging to quantify in a meaningful way.

Given the aims of my research, and the research questions I aimed to address, it was clear to me from very early on in the design of the study that using quantitative research methods would not possible or appropriate. A quantitative study could perhaps assess if the ERP was implemented, and to what extent, but exploring how or why implementation succeeds or fails, and how barriers to implementation might be addressed, would be challenging using quantitative methods. I decided that my aims could not be operationalised meaningfully in quantitative terms. This research concerns complex, social processes, investigating the introduction of a complex intervention into a complex setting. This research is exploratory in nature, as it concerns complex social processes, enacted in complex, real-world settings, and as such it would be not only challenging but also inappropriate to try to control all the variables involved. Relating these to my overall research aims, framed within realist evaluation, I aimed to identify the contexts which triggered generative mechanisms, resulting in desired outcomes (i.e. implementation success).

However rich and thorough data collection is, without suitable analysis, raw data is purely descriptive. In order to gain a deeper understanding of the implementation process, I decided to analyse the entire dataset using the widely used Thematic Analysis approach, as described by Braun & Clarke (2006). Thematic analysis is one of the most commonly used analytic approaches in qualitative research, particularly within psychology and healthcare research. It is often viewed as the most basic of qualitative approaches, that does not require any specialist knowledge or theoretical understanding to undertake. However, I argue that this view is short-sighted, and overlooks the many benefits and strengths of this approach. The assumption that thematic analysis is "basic" implies simplicity, often resulting in poor-quality analyses and superficial research findings (Braun and Clarke, 2006). Thematic analysis is often poorly demarcated as an analytic approach in its own right, and the term "thematic analysis" is used interchangeably with other approaches. This is particularly true within my discipline of psychology, where quantitative approaches still account for a large majority of research conducted, and different qualitative approaches are often misunderstood or poorly delineated. Terms which thematic analysis are often combined with or used interchangeably with include content analysis, phenomenology and ethnography (Javadi and Zarea, 2016), despite all of these being distinct and specified clearly within other disciplines where their use is more common or familiar (such as sociology, anthropology, and linguistics).

As I had decided to access the phenomenon of ERP implementation primarily through the perspectives of the SILs, I did consider adopting an idiographic analytic approach, such as Interpretative Phenomenological Analysis (IPA). However, after considering this in relation to my research questions, I decided that IPA, with its overtly subject-centred focus (Smith and Eatough, 2007), would make it challenging for me to comment on the process of ERP implementation more generally. Although I would be exploring the process primarily via narratives provided by a specific participant group in a specific context, my decision to do so was driven by a practical means of gaining a detailed overview of the whole process, as described by a consistent narrator, rather than a specific aim of describing the lived experiences of this particular participant group. As well as the semi-structured interviews I conducted with the SILs, and their own ethnographic field notes, observations and reflections, I also used ethnographic field notes, observations and reflections collected by PERFECTED researchers. My focus of study was the process of ERP implementation, rather than the specific experiences of any particular individual. The SILs acted as "key informants" in the data collection process, as their role within PERFECTED WP2 meant they had a good overview of all aspects of the process of ERP implementation, and they could offer valuable insights into the challenges presented during implementation (Mays and Pope, 1995; Gilchrist and Williams, 1999; Palinkas *et al.*, 2015). This did not entail that I intended to explore the lived experiences of this

particular participant group, but that they were the best means I had available to access detailed and insightful information into the process of ERP implementation. Hence, I decided IPA would be an unsuitable analytical approach.

Through this research, I wanted to describe and explore the implementation of a new ERP in three different UK hospitals, in order to test and further develop the programme theories proposed in **Chapter 2**. Given the dearth of existing research into the ERP implementation process in UK hospitals (particularly in regard to implementation strategy, and how staff managed barriers to implementation), I felt it not only important but necessary that the analysis be driven by the data, rather than rooted in any specific theoretical framework. Having no direct experience of working on a hospital ward myself, and having only a theoretical knowledge of ERPs, I needed to adopt an analytic approach which allowed me to remain open to the experiences as reported by my research participants, without pre-judgement or assumption.

Unlike other qualitative approaches such as IPA, thematic analysis is not tied to specific theoretical frameworks, and can be driven by the emerging data, which allows for what Braun & Clarke (2006) refer to as "unexpected insights" when exploring an under-researched phenomenon of study, such as this. My decision to analyse my dataset thematically was based on this inherent flexibility, not only with the data it can be applied to but also the conceptual framework which underpins the analysis. Thematic analysis is particularly useful when analysing a disparate dataset, which includes data gathered from a variety of sources and using a variety of data collection methods. This was true of my own dataset. Using thematic analysis was also practical from a personal perspective, as I have previous experience of using this approach in other areas of healthcare research. As the quality of qualitative research relies in large part on the expertise of the researcher, being confident in the analytic techniques I employed was an important consideration in the design and execution of my research. A full account of how I conducted my analysis is given in section **4.7.2**.

Thematic analysis is frequently applied but often underutilised, particularly in the fields psychology and healthcare research, where it is often employed to simply highlight patterns in datasets, as a precursor to conducting further quantitative enquiry (Tuckett, 2005). Braun & Clarke (2006) argue that an important and often overlooked step in thematic analysis is interpretative analysis: going beyond a mere description of the data, and generating meaning-making through a cross-examination of generated themes and the entire dataset, with the aim of addressing specific research questions. In order to ensure my own analysis of my dataset provided this level of interpretative analysis, I made cross-comparisons between different data types, and related implementation theory, to further develop the programme theories presented in **Chapter 2** (Fereday

and Muir-Cochrane, 2006). Although noting areas where experiences across the three partner sites converged served to support the initial programme theories, highlighting incidences of divergence was equally important, as this informed further development of the proposed theories (particularly in regard to contexts required to trigger generative mechanisms, which were described in limited detail in existing implementation literature). In this regard, thematic analysis also serves as a good "fit" within my overall realist evaluation approach, as it is a fundamentally exploratory method of data analysis, making sense of often disparate datasets and distilling these to provide coherent but detailed narratives (Aronson, 1995; Javadi and Zarea, 2016). This makes it particularly well-suited for applied research as, much like realist evaluation more generally, it allows researchers to provide practical and specific recommendations to policymakers (Ward, House and Hamer, 2009; Braun and Clarke, 2014). As with all qualitative research methods, the aims of both realist evaluation and thematic analysis in this sense are not to provide a general theory for the phenomenon of study, but to highlight important areas of convergence and divergence, and develop conceptual understanding in a way that can provide practical guidance.

3.4 Quality assurance

Historically, the use of qualitative approaches has been criticised (by quantitative researchers, who still constitute the majority in medical research) as being "unscientific" (Mays and Pope, 1995). However, this perception is increasingly being challenged. Although the use of qualitative research methods is by no means new, their increasing inclusion in medical and healthcare research is relatively recent (Berkwits and Aronowitz, 1995). The use of qualitative methods aims to address research aims for which a quantitative approach would be unsuitable, for example enhancing an understanding of context, describing the lived experiences of healthcare professionals and patients, and exploring *how* and *why* a particular policy works in certain settings rather than others, instead of capturing *to what extent* it works (Al-Busaidi, 2008). By describing the phenomena of investigation, qualitative researchers strive to develop concepts that aid our understanding of these phenomena in specific settings. The inclusion of qualitative methods in healthcare research is not an effort to replace quantitative approaches, but acts as an important complementary approach which gives added insight into challenges faced by clinicians and policymakers alike.

Despite the increase in demand for qualitative research in healthcare and medicine, which sees many large research programmes including qualitative studies as an integral element of developing understanding (Gilson *et al.*, 2011), it is subject to ongoing controversy and debate. The main issues raised against qualitative approaches concern its validity and the way in which it strives to address clinical research questions. These approaches are criticised as producing un-generalisable findings, detailed but narrow findings (i.e. findings that say a lot about very little), and are fundamentally

irreproducible (Poses and Isen, 1998). Critics argue that for these reasons, qualitative research methods simply do not produce data or findings which are inherently meaningful. However, as explained by Greenhalgh et al. (2016), quantitative studies can also produce findings which are (unexpectedly) impossible to replicate, and qualitative research provides valuable insight to develop understanding of the phenomenon in question. One study of the introduction of surgical safety checklists demonstrated a significant reduction in complication rate, and in patients deaths during surgery (Haynes *et al.*, 2009), but some subsequent attempts to replicate these results have failed (Urbach *et al.*, 2014; Reames *et al.*, 2015). A review of qualitative research into surgical checklist introduction explored the contextual factors which impacted checklist success (Bergs *et al.*, 2015), highlighting important barriers which need to be considered when introducing interventions such as these. This example is just one important demonstration of the value of qualitative research in improving healthcare provision, as such insights would have been unlikely when relying on quantitative enquiry alone.

After discussion with my supervisory team, I hesitated to include my consideration of this subject in this thesis, thinking perhaps I was over-playing the challenges faced by qualitative researchers in the field of healthcare research. However, with highly influential medical and healthcare journals such as the British Medical Journal (BMJ), the New England Journal of Medicine, and JAMA, proposing policies that reject qualitative papers, as they are considered "low priority" and "lacking practical value" (Greenhalgh *et al.*, 2016), I felt a thorough consideration of the challenges faced by qualitative researchers in healthcare research was appropriate. Although the inclusion of qualitative methods in healthcare research programmes is on the increase, suggesting a recognition of the value of qualitative insights in healthcare research, qualitative researchers still face challenges, both in conducting and disseminating research findings. Academic journals act as key gatekeepers to the changing face of the research landscape, and therefore have a responsibility to ensure that the published literature represents the best quality research currently being conducted, regardless of methodological approach. In line with the views Greenhalgh et al. (2016), I argue that different research approaches contribute different facets of understanding to any given phenomenon, and assuming the research is of a high quality, is worthy of publication.

Greenhalgh et al. highlight this issue with their 2016 open letter to the BMJ, explicitly stating that the publication of qualitative research is an "extremely low priority" for this journal, due to the supposedly low level of citations for articles of this type. Poor quality qualitative research certainly exists, including qualitative research with little impact or relevance to the broader understanding of their subject of study. However, as with all research, qualitative research needs to be judged appropriately rather than rejected out of hand. This publishing bias is further pronounced by the

publication of quantitative studies demonstrating poor methodological quality (Altman, 1994; Ioannidis, 2005; Pannucci and Wilkins, 2010). An appropriate appraisal of qualitative research requires reviewers who understand and have experience in using qualitative methods themselves, as well as particular skills in reviewing and appraising qualitative findings. Opponents argue that qualitative research merely presents subjective, anecdotal accounts of phenomena, and that strong researcher bias is unavoidable, making findings irreproducible. However, these criticisms are based on the fallacious premises that qualitative and quantitative aim to address similar research questions, and that these approaches can be judged on quality using the same evaluative criteria. As demonstrated by the example described above (and many other, highly cited qualitative studies), qualitative research provides unique insights which complement quantitative research in helping the ongoing development of theoretical understanding. Qualitative research demands different evaluative criteria than traditionally used to evaluate quantitative research (Bergman and Coxon, 2005). Quantitative research is conducted using well established, clearly defined criteria, against which it can be judged to be valid and meaningful. Qualitative research does not have such clear-cut guidelines, as the design and execution of qualitative studies varies significantly and some evaluative criteria may be appropriate for certain study designs but not for others. Due to the differences in function and purpose of data and methods (Stiles, 1999; Mays and Pope, 2000), quantitative evaluative criteria are not appropriate when assessing qualitative research.

The question remains as to how researchers can ensure quality in qualitative research. Quality assurance in qualitative research remains a controversial and hotly debated subject, mainly concerning the topics of researcher subjectivity, the production of “meaningful” research findings, and the supposed esoterica present in the development and conducting of qualitative research (Mays and Pope, 1995; Carter and Little, 2007). Yardley (2000) discusses the “sharp dichotomy” that has arisen since qualitative research approaches first began to be more routinely included in healthcare research programmes. Although “qualitative research” refers to a broad and diverse range of research methods, it is often seen by quantitative researchers simply as a contrast to quantitative research. Delineating such a diverse range of approaches with such a “catch all” definition makes designing appropriate and relevant evaluative criteria challenging. A broad range of different evaluative criteria have been developed by academics from different disciplines (include sociology, anthropology, psychology and healthcare researchers), addressing different qualitative approaches. They vary in their specificity regarding the assumed methodological approach, and certain sets of criteria would be unsuitable to evaluate the quality of this research, due to their specific and narrow field of focus, philosophical assumptions, or analytic approaches (Cohen and Crabtree, 2008). In response to this, I will be using a set of criteria devised specifically for qualitative

research methods in health research (Yardley, 2000) to demonstrate best research practice in my own qualitative research. I decided to use these criteria not only because they were designed with healthcare research in mind, but also because they explicitly acknowledge the broad range of qualitative approaches that exist. Not only am I familiar with these criteria and have applied them to my previous qualitative research (Coxon, Cropley, *et al.*, 2016), but they are also recommended in Braun and Clarke's (2006) widely cited guide to conducting thematic analysis (which, as discussed in section **3.3.8**, I would be using for my data analysis).

Yardley explains that there are dangers of developing evaluative criteria that are too narrow: too often, only those qualitative approaches which best "fit" with the existing, prevailing quantitative assumptions, or are consistent with quantitative approaches, will be seen as meaningful in healthcare research. The issue here being that qualitative research has, on the whole, fundamentally different aims to quantitative research, and by restricting which approaches are deemed "acceptable" purely based on their similarities to existing quantitative goals and processes also restricts the breadth and depth of possible understanding, with a bias for a particular, prevailing perspective. Yardley's proposed criteria are broad enough to hypothetically encompass any research approach (although they were designed with qualitative healthcare research in mind) but specific enough to ensure that research is conducted with the aim of being thoroughly reported, rigorous, and meaningful. By developing broad evaluative criteria, Yardley ensures that qualitative research in healthcare can be judged by its quality and contribution to understanding, regardless of the specific qualitative approach (or combination of approaches) adopted. This was particularly important in my research, as I collected and analysed data from a range of sources, and my dataset consisted of participant interviews, ethnographic field notes, observations, reflective notes and ward audit data.

Yardley specifies four main domains should be met in order to demonstrate research quality:

1. sensitivity to context
2. commitment and rigour
3. transparency and coherence
4. impact and importance

With this in mind, I have provided an overview below as to how my research fulfilled these criteria, but a fuller explanation of how my research demonstrates its quality is of course demonstrated throughout the body of this thesis.

The first and last of these, "sensitivity to context" and "impact and importance", have in part been addressed through the initial introduction, overviewing existing literature and defining a need for

further exploration of this area of research. I have given a comprehensive background, outlining the context in which my research is situated, and why this research is timely and appropriate. Also regarding "sensitivity to context", this been further addressed through my appraisal of existing research of ERP implementation literature, given in **Chapter 2**. In order to design my empirical study to effectively address gaps in ERP implementation theory, I first had to clearly identify those gaps in understanding I sought to address. Finally, when discussing the results of my research in **Chapter 5**, I draw upon related existing theory from organisational change and implementation research, demonstrating how the results of my research develop present understanding in a way that is both valuable and meaningful.

The second and third criteria defined by Yardley are more typical expectations of research more generally, as they specify expectations for data collection, analysis and reporting to be comprehensive and coherent. For the criterion of "commitment and rigour", I have reported my research methods (including how I went about designing these appropriately) in great detail. I analysed interview data which I had collected myself, but also ethnographic data collected by the PERFECTED research team, in order to provide a rich description of the ERP implementation. The analytic strategy for this study is stated in detail in section **4.7.2**, and demonstrates an in-depth engagement with the dataset. Aside from the process of immersing myself in the dataset, by the very nature of PhD research, I spent three years engaged with my topic of study, and the main study comprised the study of a twelve-month implementation process as part of PERFECTED WP2.

For purposes of "transparency and coherence", this PhD thesis and the process of defending it *viva voce* forms a large part of what Yardley refers to as "rhetorical power or persuasiveness". I have described in detail not only the process of the research I conducted, but also kept detailed notes of my reflective process throughout the process. In an attempt to detail every aspect my process, I have also attached a number of appendices to this thesis to illustrate the development of my research from initial design to final outcomes. I have provided a prologue chapter, giving information about my own personal background and motivations for conducting this research, and provide personal reflections throughout the thesis to aid understanding of my decision-making processes.

Finally, the criterion of "impact and importance" is in part addressed through my appraisal of existing literature, demonstrating a need for this research, and in part through my resulting discussion and conclusions in **Chapters 5 and 6**. This criterion is also met by my successful dissemination of my research findings so far, through conference presentations and peer-reviewed publication (Coxon, Nielsen, *et al.*, 2016, 2017; Coxon, Fox, *et al.*, 2017). I intend to prepare further

articles for publication, following the successful completion of this PhD. Appropriate dissemination of research findings remains a critical aim of conducting meaningful healthcare research.

Chapter 4 – Data Collection & Analysis

In this chapter, I present my empirical research looking to address the following four research questions:

1. What are the main barriers and facilitators to ERP implementation?
2. How do change agents promote pathway adherence by staff?
3. What are the key skills necessary to fulfil the role of a change agent?
4. How do change agents negotiate the complex network of multidisciplinary staff relationships in order to achieve implementation success?

To answer these questions, I collected and analysed a range of qualitative data exploring the process of implementing a new ERP in three UK hospitals. The ERP of study was developed by the PERFECTED research team, based at the UEA. In this chapter, I give a concise and coherent account of the methods I used to conduct my empirical study, including information about the setting, my participants, and my data collection and data analysis methods. I will then present my results and analysis, which includes three separate narratives for the implementation process at each partner hospital, and a cross-comparison of all three. A full theoretical discussion of these findings is presented in **Chapter 5**.

4.1 Methods

4.1.1 Setting

This study was conducted at the UEA and the three partner sites included in PERFECTED WP2. The UEA is a university based in Norfolk, UK, and the main site for the PERFECTED research programme. As described in **Chapter** 1, PERFECTED was a 5-year (2013-18), £2m NIHR funded research project, which aimed to develop and trial a new, evidence-based ERP specifically to improve the care and outcomes for hip fracture patients with dementia. At the time of writing this thesis, PERFECTED WP3 was in progress. The ERP (known as PERFECT-ER) was designed during Work Package 1 (WP1) of PERFECTED, following a process of expert consultation, PPI consultation, and the findings of a systematic review of care for hip fracture patients with dementia (Smith *et al.*, 2015). PERFECT-ER also incorporated UK national guidance on hip fracture care, from the National Institute for Health and Care Excellence (NICE) Clinical Guideline (CG) 124 (NICE, 2011) and Quality Standard (QS) 16 (NICE, 2012).

This study was aligned with Work Package 2 (WP2), the trial of the first draft of the ERP in three UK NHS hospitals, which took place over twelve months, between October 2015 and September 2016. At each of the WP2 hospital sites, a Service Improvement Lead (SIL) was appointed

internally to coordinate implementation, collect audit data and feedback on pathway content and feasibility in practice. Each SIL acted as a co-researcher as part of PERFECTED, and they were supported by a local PERFECTED programme lead (PPL) and Principal Investigator (PI) for their site. Through an action-research process, WP2 aimed to implement PERFECT-ER to optimise care at the three hospital sites, working collaboratively with NHS staff employed there.

The partner sites included in PERFECTED WP2 were all UK NHS hospitals, and the SILs were based in wards which delivered trauma orthopaedic care to patients with hip fracture. The partner sites varied in size, available resources, staff, facilities, and geographic location (for example SIL1's hospital was smaller and more rural, compared to SIL2's hospital, which was a major trauma centre in an urban setting).

4.1.2 Participants

I set out to provide a rich description of the SILs' experiences in implementing the PERFECT-ER, and so, working within the parameters of the larger PERFECTED study, my participant sample comprised the three SILs employed for WP2.

All three SILs attended an induction day at the UEA in September 2015. This provided me with an opportunity to have an initial, informal meeting with the SILs and discuss with them directly my research aims and answer any questions they had about the research process.

Following this face-to-face discussion, I emailed all three SILs in March 2016 (see Appendix 7) with a formal invitation to participate in my research project. Included in the email was a Participant Information Sheet (see Appendix 2) and a copy of the Study Consent Form (see Appendix 3) for the SILs to review.

4.1.2.1 The SIL role and responsibilities

The participants in this study were the three SILs appointed as implementation coordinators, and co-researchers for PERFECTED WP2. Each SIL was recruited via an internal job vacancy at each partner hospital. A summary of their basic demographic information is given in Table 2. I discussed my study with them informally, face-to-face, when I first met them at their induction day at the UEA in September 2015. After my study was granted ethical approval, I formally recruited them via email (see Appendix 7).

Each SIL was employed by the PERFECTED project on a twelve-month, 22.5 hour per week contract. All three were registered nurses and had some experience of working in trauma orthopaedics, although this was not a requirement for the SIL role. Outside their SIL contracted hours, SIL2 and

SIL3 continued in their previous roles as ward nurses, and SIL1 worked as a research nurse at her hospital site.

Participant	Gender	Professional Background	Site
SIL1	Female	Theatre nurse since 2005; Trauma orthopaedics since 2010	Small district general hospital
SIL2	Female	Deputy Ward Sister (Band 6); Trauma orthopaedics since 2007	Regional major trauma centre
SIL3	Female	Ward Staff Nurse since 2007; Elective orthopaedics & trauma	Large trauma ward

Table 2: Participant demographics

The SILs fulfilled a dual role, on the one hand coordinating the implementation of PERFECT-ER within their hospital, and on the other collecting research data for the PERFECTED research programme. As described in section **3.3.4**, the SILs duties included promoting the necessary changes to implement PERFECT-ER on their wards, running regular ward audits to ascertain pathway adherence, following these audits up with multidisciplinary "action-planning meetings" to discuss the audit outcomes and plan for improving adherence, and keeping observational and reflective field notes throughout the implementation process. In the following sub-sections, I will give a brief overview of each hospital site that the SILs were based at. In the interests of confidentiality, certain specific details have been omitted, but I have tried to give as full an account of each site as is reasonably possible, to help the reader to contextualise the subsequent narratives.

4.1.2.2 Hospital 1

SIL1's hospital was a university hospital in a rural county, providing care to a population of approximately 230,000 residents across the region. It has one main site, as well as a number of outreach clinics in the local area. The hospital was officially opened in the early 1980's, and became a Foundation Trust in 2006. It is primarily an acute hospital with an Accident & Emergency department, but also offer some specialist services (e.g. hyperbaric chamber for ventilating critically ill patients). The hospital employs approximately 3,000 members of staff and has 500 beds (including high dependency, critical and intensive care, as well as general surgery, maternity, paediatric and neonatal beds).

4.1.2.3 Hospital 2

SIL2's site was a large teaching hospital, which opened in the late 1970's, and is based in an urban setting. It has over 1,300 beds and employs more than 6,000 members of staff, and serves a population of approximately 2.5million across the region. It operates a busy Accident & Emergency

department, and a large trauma centre (the main trauma centre for the region). The hospital has three trauma and orthopaedic wards: one male, one female, and one mixed-sex ward (the latter of which SIL2 predominantly worked on, prior to starting her role as a SIL).

4.1.2.4 Hospital 3

SIL3's hospital was one of two sites comprising a Foundation Trust, which opened in the mid 1960's, and is based in a large town in a rural county. It operates a busy trauma/orthopaedics department, taking all of the trauma cases for the region. In 2016/17, Hospital 3 and its partner site had more than 120,000 inpatients and over 450,000 people attended outpatient clinics. The Foundation Trust operating Hospital 3 employs over 6,000 members of staff. SIL3 previously worked on a ward which was supposed to be a dedicated "neck of femur" ward, but explained that this ward took other trauma cases as well, due to overwhelming bed demands.

4.3 Data Collection

The data used in this study consisted of primary data which I collected through semi-structured interviews with SILs, and ethnographic data collected by PERFECTED researchers as part of PERFECTED WP2.

	Ethnographic research	Ward audits	Optimising care sessions	Interviews with SILs
PERFECTED WP2	Observations & interviews; SILs field notes	Checklist, conducted by SILs	PERFECTED researcher observations & field notes; SILs field notes & reflections	Analysis only
PhD study	Analysis only	Analysis only	Analysis only	Individual, face-to-face, audio-record & transcribe; analysis

Table 3: Data collection sources and use in PERFECT-ER implementation study

As a named researcher on the PERFECTED WP2 protocol, and as specified in the substantial amendment (which provided ethical approval for my project, see section **3.2.4**), I was able to use data collected by both the SILs themselves (their observations, reflections, and notes from optimising care sessions) and PERFECTED researchers (field notes, observations and reflections). A summary of what and how the data was collected, and how it was used, is given in Table 3.

4.3.1 SIL interviews

My primary data consisted of face-to-face, in-depth, semi-structured interviews with the SILs. I have previous experience designing, conducting and analysing interviews for qualitative research (Coxon, Cropley, *et al.*, 2016). I interviewed each SIL individually, on three separate occasions (at six, eight, and eleven months into the WP2 process). I conducted all of the interviews myself, following interview topic guides which I developed based on my existing knowledge of ERPs, the PERFECTED research process, knowledge translation and behaviour change theory, the findings from my realist synthesis, and emerging findings from the PERFECTED WP2 research team. I discussed my research aims with my supervisors and with members of the PERFECTED research team to gain a better understanding of the PERFECTED WP2 research process and inform any necessary changes to the interview topic guide for the initial round of interviews.

I arranged with the SILs to have individual interviews with them at three different time points across the twelve-month research period (roughly at the beginning, middle and end of the implementation process), to explore how their experiences changed over time. I also supplemented this data with ethnographic field notes gathered by PERFECTED researcher, notes I took from sitting in on SIL teleconferences with the PERFECTED team, and reflective diaries and observation notes kept by the SILs themselves over the course of the project.

I used a topic guide rather than a more formal interview schedule to allow for open-ended questioning, and to encourage the SILs to talk freely about their experiences in the ERP implementation process (see Appendix 8 for an example of one of the topic guides I used). Topic guides for the second and third round of interviews followed a similar structure, with some additions informed by emerging data from the PERFECTED WP2 action research process. The topics covered in each interview included: perceptions of the SIL role; expectations of PERFECT-ER; expectations of the implementation process (including perceived barriers/facilitators to implementation); managing challenges; personal development.

All interviews were audio-recorded, and each interview lasted between 20-60 minutes, in line with expectations. I concluded each interview once I had covered all of my intended topics for discussions and I was satisfied that no new, relevant information was being elicited. Hypotheses developed at the early stages of the research process helped me to develop further questions and topics for discussion in subsequent interviews.

Interviews were held at three different timepoints across the WP2 twelve-month research period. I organised the interviews to coincide with pre-planned SIL meetings, i.e. meetings at which all three SILs would be at the same location. This was practical as not only did it minimise the amount of time

and travel I had to do as a researcher, but it also minimised the time demands on the SILs, as I was not requiring them to take time out from their duties within their day-to-day activities in their respective hospitals. Although I interviewed all three SILs on the same day at each round, interviews were conducted with each SIL individually, one-to-one, in a quiet and confidential space. The first round of interviews were conducted in March 2016, in a quiet room at SIL3's hospital site. The second round of interviews were conducted in May 2016, in a quiet room at the UEA. The third and final round of interviews was conducted in August 2016, in a quiet room at the UEA.

All of the interviews were conducted in quiet, pre-booked rooms, to ensure privacy and confidentiality. For the first round of interviews, which were conducted at SIL3's hospital site, I liaised directly with SIL3, who arranged the booking of a suitable room. For the second and third round of interviews, which were conducted at the UEA, the interview rooms were booked by a member of the PERFECTED research team, via the UEA's internal room booking system. I tried to arrange the interviews to coincide with pre-planned SIL meetings or group site visits, to minimise the time demand on both the SILs and on myself. All three SILs were committed and enthusiastic about being interviewed, which made the process not only straightforward, but also enjoyable and hugely rewarding.

Prior to the first round of interviews, I gave each SIL a verbal explanation of my research and its aims. I also explained the interviewing process, and gave an opportunity for any questions. A copy of the Participant Information Sheet (Appendix 2) was given for each SIL to keep, and I reminded SILs that if they had any questions or concerns following the interviews, my contact details were supplied. Each SIL gave formal written consent, and I gave a copy of the signed consent form (Appendix 3) to them each to keep. I kept copies of all the consent forms and information sheets in a separate research file, securely locked in my home office.

4.3.2 Secondary data from PERFECTED

As well as my primary interview data, I also had access to a range of different qualitative data collected by PERFECTED researchers as part of WP2, which gave me additional insights into the implementation process. This comprised ethnographic data, ward audits and data from the optimising care sessions (see Table 3 above). Although I did not collect this data myself, I did attend at least one optimising care session at each hospital site, as an observer, and took my own reflective notes following these. I was then able to cross-reference my own notes with the notes taken by the PERFECTED researchers to compare how closely our observations were in agreement, as a short-hand test of reliability. This gave me confidence that the notes taken by the PERFECTED researchers

were similar to notes I would have taken myself, were I able to attend and observe all of the optimising care sessions first hand.

This secondary data was collected by the SILs themselves, as well as three members of the PERFECTED research team, who were all experienced in collecting qualitative research data. The data was collated by the PERFECTED research team, and stored securely both on-site at the UEA, and digitally via a password protected shared-drive.

Of the secondary data, the notes I found most interesting and valuable to my study and analyses were the SILs' own observations and reflective notes collected across the research period. Although all of the secondary data provided invaluable contextual insights, the SILs' own notes gave insight into their priority focuses, their writing style (e.g. their choice of language and what they chose to present in writing) and an understanding of how they conceptualised the implementation process and its challenges, at the time of writing. I analysed this data in a similar way to how I analysed my primary data, and used it to help situate myself in the SILs' experience, informing my final analysis of the whole dataset.

4.4 Data Analysis

I transcribed the interview recordings verbatim, with any truncations clearly marked, and gave explanations or these (for example: tangential discussion not related to the research aims). Participant identifiable data was anonymised to retain confidentiality.

I decided to interpret my data using thematic analysis. Thematic analysis is a popular but often misunderstood approach to analysing qualitative data. It is primarily adopted to identify patterns (or "themes") within a dataset in order to describe a particular phenomenon under study. A full justification for why I decided to analyse my dataset using thematic analysis is given in section **3.3.8.**

Thematic analysis involves a number of key stages –

1. Familiarisation with dataset. Having conducted and transcribed the SIL interviews myself, I already had a degree of familiarity with the data, and this stimulated initial ideas for possible themes. To further immerse myself in the data, I repeatedly re-read the transcriptions and re-listened to the original audio recordings, taking reflective notes of aspects I found particularly pertinent or interesting. My reading of the dataset took two main forms: reading the interview transcripts chronologically for each SIL (i.e. SIL1's first, second and third interviews read in sequence), and reading the interviews as cross sections of time (i.e. reading SIL1, SIL2 and SIL3's first interviews as a set, then their second interviews as a second set, then finally their third interviews as a set). For my secondary analysis of the

PERFECTED data, I followed a similar approach, repeatedly re-reading the source material, both chronologically for each hospital site, and then cross-sectionally across the three sites, for different points in the research process.

2. Initial coding. Once I had re-read each of the transcripts multiple times, and familiarised myself with the data, I began the coding process, by again re-reading each interview in turn, identifying what I felt were key elements within the text, and noting down short meaningful phrases or "codes" which encapsulated these elements. I then repeated this process with the PERFECTED ethnographic field notes. An example extract of coded text is given in Appendix 9. Thorough coding is an important step in "organising the data" and forms the foundation for generating broader themes. Braun & Clarke (2006) state that coding style may vary depending on whether the analyst is more data- or theory-driven. I considered my analysis to be more data-driven (as my existing knowledge of ERP implementation was limited), however I did notice that whilst coding my transcripts, I approached the data with specific questions in mind (i.e. what type of challenges did the SILs encounter in implementing the ERP, and how might this relate to the existing models of behaviour change). With this in mind, I aimed to keep my focus wide, and code for as many potential themes as possible, without presuming too much from my own preconceived ideas about the implementation process at the different hospitals. I repeated the coding process multiple times, to ensure I had coded the texts as thoroughly as possible.
3. Generating themes. After collating all of my codes from the dataset, I began to sort these codes into loose groups and generate initial, overarching themes. At this stage, I created a "thematic map" of the data, and considered how the different codes related and interacted in meaningful ways. Certain themes contained a large number of codes, some themes developed out of a single code, and other codes were discarded as not being significantly related to my research aims. Some of my overarching themes contained a number of interrelated sub-themes. Initially, I created a set of themes for the data relating to each hospital site, i.e. a set of themes relating to Hospital 1, another set for Hospital 2, and a final set of themes related to Hospital 3.
4. Reviewing themes. After generating a map of candidate themes and sub-themes, I compared data within these themes (i.e. the source data from the interview transcripts and ethnographic field notes) to judge whether or not these cohered meaningfully. I also compared the candidate themes with each other to determine whether these were clear or distinct, or if they needed to be adjusted or combined (a consideration of what Patton (1990) refers to as internal homogeneity and external heterogeneity: data within each

theme should co-refer in a meaningful way, while separate themes should be clearly distinct). After reviewing the themes in relation to their related extracts, I then considered my revised thematic map in relation to the entire dataset, to discern to what extent the map "accurately represented" my data.

5. Constructing a narrative. Once I was satisfied that my set of themes provided a satisfactory representation of my whole dataset, I began writing detailed analyses of each theme, providing supporting quotations of extracted data. I then began the long and challenging process of turning my collection of themes into a clear, concise and coherent narrative report which not only communicated the content of my data, but more than this, provided a compelling argument addressing my research aims. I constructed three separate narratives at this stage, one describing and interpreting the experience of implementing PERFECT-ER at Hospital 1, one for Hospital 2, and a final narrative for Hospital 3.

   After coding, theming, and constructing narratives for the three hospitals separately, I then compared and contrasted these, exploring to what extent these experiences of PERFECT-ER implementation diverged and converged. I then revised a final "master list" of themes to reflect the shared experiences of the three hospital sites, and constructed a compound narrative which concisely and comprehensively explained these. It was with this final, combined narrative that I analysed the phenomenon of implementing an ERP into UK hospitals, relating what I had learned from my qualitative exploration to existing theory.

In the remainder of this chapter, I present my analysis and key findings, including the narratives from across the implementation process. A full discussion of these findings, with reference to existing behaviour change, process implementation, and organisational change theory, is given in **Chapter 5**.

4.6 Ethics

This study was granted ethical approval by the NHS Health Research Authority, South Central – Oxford C Research Ethics Committee (REC), as part of a substantial amendment to the existing ethical approval for the PERFECTED Work Package 2, REC reference: 15/SC/0294, Amendment 1 (see Appendix 6).

4.7 Results & Analysis

Although I was only working with three participants, and interviewed each participant only on three separate occasions, the research process covered a twelve-month period, and I met or spoke with the SILs (both formally and informally) on a number of different occasions between formal interviews (for example, I sat in on SIL teleconferences with the PERFECTED research team, and I attended some of the SILs' action-planning meetings). I was also working with the ethnographic field

data collected by the SILs and the PERFECTED research team, adding another element of complication to my data management. In order to keep track of my contact with the SILs and the dataset as a whole, and to manage an overview of the implementation processes over time, I kept a spreadsheet all of the different data collection points and meetings, with some rough notes, observations and reflections.

Site		Hospital 1	Hospital 2	Hospital 3
SIL interviews	Interview 1	50 minutes	42 minutes	26 minutes
	Interview 2	35 minutes	14 minutes	18 minutes
	Interview 3	49 minutes	27 minutes	27 minutes
PERFECTED action research data	PERFECT-ER checklist data	5 checklist cycles per site, 10 patients per cycle		
	PERFECTED researcher action-planning meeting notes	Field notes, observations & reflections from cycles 1, 2 & 3		
	SIL collected data	Field notes, observations, reflections & weekly reports – 36 documents between Oct 2015 – Sept 2016	Field notes, observations, reflections & weekly reports – 31 documents between Oct 2015 – Sept 2016	Field notes, observations, reflections & weekly reports – 33 documents between Oct 2015 – Sept 2016
	SIL & PERFECTED teleconferences	Updates, discussions & feedback between SILs & PERFECTED research team, 16 teleconferences between 16/20/25 – 15/07/16		
	Miscellaneous	Correspondence notes – 3 emails and 2 phone calls between SIL & PERFECTED research team; misc. notes and documents about policy & procedure	Notes and documents about policy & procedure; email regarding "dementia champion" dates	Notes and documents about policy & procedure; copies of staff newsletter; notes on multidisciplinary team involvement at site

Table 4: Summary of data collected for empirical study

Transcribing the interviews for analysis took nearly eight months, which was a lot longer than I had anticipated. This was partly due to me being busy preparing my realist synthesis for publication, but partly due to the laborious, slow and tedious task of transcribing. I have always found the process of focusing on transcription challenging, and had considered at one point paying to have these interviews transcribed by a third party, but decided that the process of transcription was an important stage in immersing myself in the data. By the time I had completed transcribing, I anticipated the analysis process with some trepidation, as this was a larger task still. I found it hard

to motivate myself at this stage, especially considering some difficulties I was having in my personal life, including traumatic family bereavement.

During the transcription process, I took reflective notes and early observations about the data. I also shared my transcriptions with the wider PERFECTED team (as specified in the substantial amendment), and had the opportunity to discuss my early ideas with members of the PERFECTED research team. This was mutually beneficial, as I was able to explore concepts with an informed third party, and my data was useful to PERFECTED researchers in informing the next phase of the PERFECTED research project. These interviews provided me with a deeper insight into the challenges faced by SILs, acting as co-researchers in the implementation of the ERP. They were opportunities for SILs to describe their perspective of the implementation process and the challenges experienced in detail greater than might be possible in a group discussion. Individual interviews are a commonly used qualitative research method in gaining insight into a particular topic from the participant's perspective, and often yield unexpected insights, generating new ideas regarding the subject discussed. Combined with the PERFECTED research data, I was able to gain a rich and detailed insight into the process of implementing a new ERP in three distinct contexts.

4.7.1 Contextual background

My three participants were employed as co-researchers as part of PERFECTED WP2, a twelve-month study implementing the first draft of a new ERP developed for hip fracture patients with dementia. The ERP was developed by a research team at the UEA, in consultation with leading field experts, Patient & Public Involvement (PPI) groups, and hospital staff. The SILs received training and an induction to their role at the UEA at the start of their role (September 2015), in an effort to ensure they enacted the ERP, conducted audits, and reported observations and findings in a similar fashion to each other.

4.7.2 The analytic process

I analysed my dataset following the stages of thematic analysis as defined by Braun & Clarke (2006). I took my role as researcher into account at all stages of the analysis, as I was an inextricable factor in the process of data collection, transcription, analysis and write-up. By providing detailed descriptions of my research process, as well as extensive reflective notes throughout, I hoped to give a high level of transparency, to enable the reader to understand my process, why I arrived at the final conclusions that I did, and to demonstrate rigour as a means of quality assurance (see section **3.4**).

My primary interview data comprised the main bulk of my dataset, although this was supplemented by my own notes taken from various SIL teleconferences conversations across the research period

and the ethnographic data from PERFECTED. These secondary data sources provided additional insight and richness to my analysis, as they "filled in the gaps" between the interviews to a certain extent, both in a temporal sense but also in the sense that these reports were written in SILs' and PERFECTED researchers' own words, without prompting from me as an interviewer/researcher.

In order to keep track of my various data sources and where they were situated within the twelve-month research period, I began by keeping a digital spreadsheet timeline, with various timepoints, events, basic notes of content and reflective notes of my own. However, when I came back to this spreadsheet at analysis, I found the digital format quite hard to work with. Although time consuming, I decided to recreate the timeline on a large roll of paper, highlighting different types of notes in different coloured pen. I found this visual appraisal of my dataset much easier to work with. At this early stage of organising my data, I already had ideas for preliminary themes to describe my data. I kept notes of these, but remained conscious that they should not be too "fixed" at this stage, as my final themes would be generated from the data itself, rather than my seeking extracts from the data to confirm my early assumptions.

I began by analysing the material related to each partner hospital individually, i.e. the data for Hospital 1 as one set, Hospital 2's data as a separate set, and the data related to Hospital 3 as a final set. I began analysis of each interview by first immersing myself in the data, thoroughly familiarising myself with the content and the tone by repeated re-readings of transcripts (printed hard copies) and re-listening to the original recordings. Next, I re-read the interview transcripts again, highlighting any extracts of text I thought were pertinent or specifically related to my research questions. I then coded the interview transcripts, writing directly on the hard copy codes relating to each data extract. I repeated this process a number of times, generating as many codes as felt relevant to the source data. I repeated this process of immersion and coding for each of the interviews in a SIL's dataset in turn. Once I had completely coded a whole set of SIL's data, I collected a master list of all of the codes generated within that SIL's interviews, and used these to begin generating a thematic map of their data. I reviewed the secondary data in a similar way, highlighting any significant areas of convergence or divergence with my primary interview data, in cases where the SILs spoke or wrote differently from the way in which they spoke to me in the interview setting. In the most part however, the SILs' own reflective notes and the field notes taken by the PERFECTED research team agreed with the data collected at interview, and thus supported rather than challenged the themes I had developed from the transcriptions.

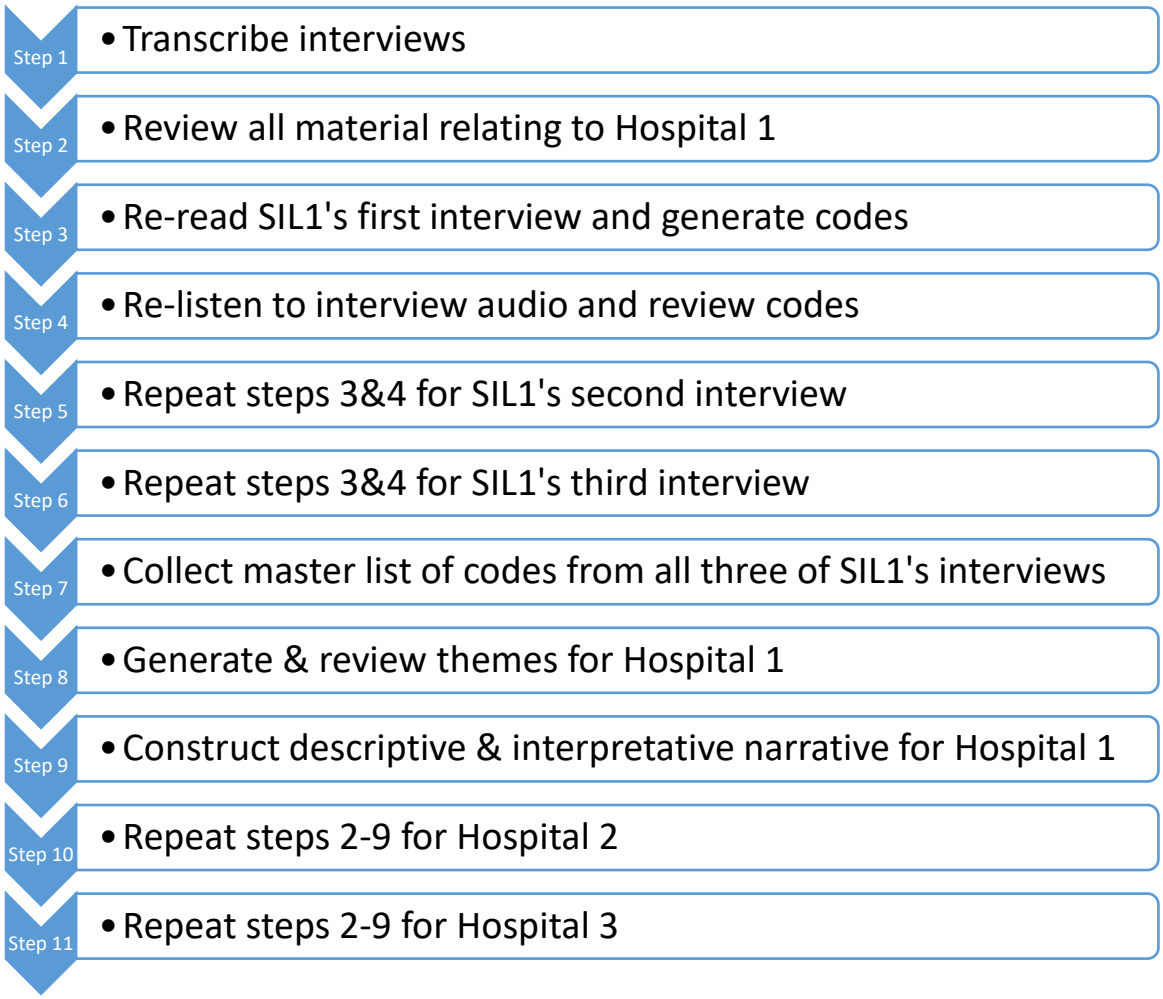

Figure 5. The analytic process for the three individual hospitals

By collecting a visual master list of all the generated codes, I was able to begin grouping them into initial themes and sub-themes. These themes were developed through a process of constant comparison, identifying persistent patterns throughout the data in a way that was coherent and concise. Although themes were not "named" to reflect specific research questions, I developed the resultant themes in order to address these. Theme development was driven by the dataset, but also informed by the research questions that this research was designed to answer. Certain themes only consisted of one or two significant codes, whereas other groups of less significant codes together constituted a more relevant theme. Some codes were either too unrelated to my research aims or so underrepresented in the rest of the SIL's dataset, that I chose to discard them at this stage. Once I had developed a preliminary thematic map, I then reviewed it in relation to the source data. By comparing these initial themes to the interviews, I was able to judge to what extent I felt they provided an accurate representation of the SIL's experiences, and made any revisions as I felt were necessary.

From my final, revised set of themes (which is given at the start of each sub-section for each hospital), I then wrote up the material relating to each partner hospital as an individual narrative as a chronological account of the SILs' experiences. This process of constructing the narrative was also an important part of the analysis and writing these was not a linear process. I wrote and revised these narratives iteratively, returning to the source data to further refine the story expressed. As well as giving an overall picture of each SIL's experience, I endeavoured to give accounts which reflected how their perceptions and attitudes changed over time. Certain themes were present throughout each SILs' narrative, whilst others approached, receded and evolved in their focus. I constantly reviewed the narratives I had written in order to review whether they presented an accurate representation of my perception of the dataset.

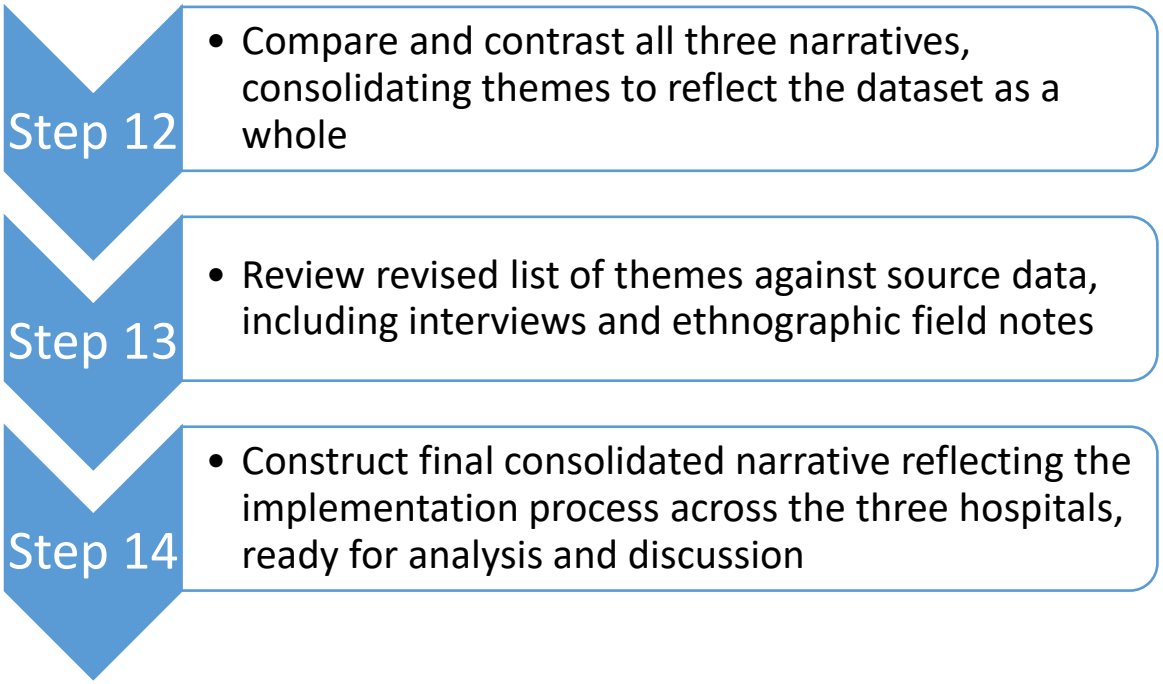

Figure 6. The analytic process, creating a combined narrative

After I presented each SIL's story as an individual narrative, I then compared the SILs' experiences to each other, highlighting significant areas of convergence and divergence between them. I consolidated all three of the SILs' collections of themes into a master list, which I then reviewed against their source data as a whole.

Finally, I collected and revised the separate narratives into one, coherent story to reflect the different experiences of ERP implementation. This was then related back to my initial research aims to ensure that this complete narrative answered the questions I had initially set out to answer and made a meaningful contribution within the scope of existing literature. This was perhaps the most challenging stage of analysis, as I had to revise the themes in a way that would not only address my

research questions in a meaningful way, but also tell a clear and coherent story about the SILs' collective experience, without losing important details about their individual narratives. Each theme needed to be presented with sufficient detail, drawing supporting evidence from both the SIL interviews and the wider PERFECTED WP2 data, in order to give a comprehensive but concise account of the implementation process as experienced at each hospital site. I also drew on publicly available information regarding each hospital site and relevant academic literature to develop this combined narrative further.

I reflected that throughout the process of interview and analysis, I had been personally affected by the SILs' experiences. I had shared some of their early frustrations, uncertainties and concerns throughout the research process. During their interviews with me, I also empathised with some of the self-doubt and the practical challenges they expressed to me, and I found it challenging to remain completely objective. However, I decided this personal connection to the participants and the source data was of valuable importance to my immersion in the data and was directly related to my analysis, and therefore in the interests of rigour and transparency, rather than trying vainly to eliminate my subjectivity and potential researcher bias, I included extensive reflective notes as part of my reporting.

In this section, I present the results of my empirical research as three separate narratives (one for each of the partner hospitals), and a final combined narrative, comparing the ERP implementation process across the three hospital sites. Although each narrative takes into account data from a variety of sources across the twelve-month implementation process, I have presented the individual narratives in three separate time points, delineated by the three interviews I conducted with each SIL. Although other data collection activities (i.e. ethnographic field notes, observations, and ward audits) were conducted outside these time points, I felt this delineation was a useful way in which to organise the data, to demonstrate the process of change over time.

4.7.3 Implementing PERFECT-ER in Hospital 1

4.7.3.1 Background

SIL 1 was based at a district general hospital in a small town in a mainly rural county, which has two orthopaedic wards, one elective and one trauma. She has eleven years' experience as a theatre nurse, with six of these in trauma orthopaedics. She was local to the area and familiar with her hospital site, although she had not worked as a member of ward staff before and therefore unfamiliar with the staff and processes. She has existing relationships with some staff members, including her local PERFECTED Programme Lead, who she has work closely with in the past, as his theatre assistant.

I first met SIL1 at an informal meeting at dinner, hosted by the PERFECTED research team. She struck me as a friendly and enthusiastic person, who was easy to talk to and keen to be involved in conversation. She was open and honest about her lack of experience working on a ward, and how this was worrying her – I got the impression that she was comparing her own experience to that of the other two SILs, and felt anxiety to prove her worth. SIL1 needed little prompting to speak openly about her experiences, and did so at length. She explained her situation readily and in great detail, to the extent that I felt as though she perhaps felt self-conscious and needed to explain or justify herself. I read her early reflective notes with great interest, as she explicitly stated that she felt the constant need to justify her presence on the ward to the ward staff, so I judged that my early perception of her was correct: she was self-conscious of her position, and felt a need to demonstrate her worth and purpose.

A dominant theme throughout SIL1's interviews was "sense of identity", as she repeatedly discussed her self-perception, her value and purpose in the role, and her sense of belonging during the project. She frequently highlighted her difference and "separateness" from the other two SILs, as well as repeatedly discussing her lack of experience of working on a hospital ward.

Superordinate themes	Sub-themes	Interview
Sense of identity	…as an outsider	1
	…as a team member	1, 2, 3
	…as a victim	1, 2, 3
	…accepting limitations	2, 3
Being part of a team	…valuing different perspectives	1, 2, 3
	…working with others	1, 2, 3
	...managing disagreements	2, 3
The research process	…expectations	1, 2
	…identifying problems	1, 2, 3
	…managing challenges	1, 2, 3
	…the importance of context	1, 2, 3

Table 5: Themes from Hospital 1's dataset

Related to this, another dominant theme for SIL1 was "being part of a team": throughout the research process, she explored her sense of belonging in different teams, for example as part of the "SIL group", as part of the wider research team, as part of the hospital staff. This sense of belonging transformed throughout the twelve-month process, at times identifying strongly with one group and distancing herself from others, and at other times feeling completely isolated from any specific

group. This fed directly into SIL1's developing sense of identity, and both affected her experience of the research process.

Prior to my first round of interviews, SIL1 had already completed two rounds of ward audits, with action-planning meetings to discuss the outcomes of these audits. These meetings were attended by a PERFECTED researcher from the UEA, who took observational and reflective notes, as well as notes from a pre-meeting with SIL1 where they discussed her expectations for the meeting.

For the first meeting, the PERFETED researcher reported that SIL1 she was anxious that "people were not taking it [the ERP] seriously" and that not many people would attend the meeting. She also anticipated "resistance to change" and that the staff would see the ERP as "having to do extra work". At this early stage, SIL1 had strong feelings about PERFECT-ER, stating that she didn't feel certain elements were necessary or indeed possible to implement. She also explained that collecting information to complete the checklist had been difficult. In the meeting proper, there were six members of staff present, including the SIL, and later SIL1 expressed to the PERFECTED researcher that she was disappointed that physiotherapy staff were not in attendance, but was over all happy and relieved with how the meeting went. The PERFECTED researcher's field notes state that the meeting was well run and all participants were "engaged and supportive", taking the process seriously and discussing how to improve the checklist scores in future. The focus of discussion seemed to be how to "get round the question" to achieve higher scores, rather than discussing the value of certain checklist items in improving care.

In the second meeting, which I also attended, ten staff members were present (including the SIL), and the meeting was less organised than before. The SIL lead the meeting and again they worked through the lower scoring items on the checklist, discussing how these might be improved. Afterwards, SIL1 expressed relief at how well the meeting went. She again discussed how she felt certain elements on the checklist were unnecessary or impossible to implement, and that she felt the pathway was not dementia specific in focus, but stated that she was anxious that she would "get into trouble from UEA for being negative about the checklist". The PERFECTED researcher observed "thinly veiled hostility" from some staff when discussing certain checklist elements (such as 7-day Allied Healthcare Professional (AHP) service), which they state was impossible and unrealistic to implement. Because this element had been reworded on the checklist since the first audit cycle, Hospital 1's score for this item had gone from 100% adherence to 0%, and the staff appeared to take this as a personal attack, as it was seen as "extremely unfair and unjustly reflected badly on the ward". The PERFECTED researcher reflected in their notes that the staff's focus seemed to be on how it reflected on them, rather than highlighting the quality of care provided to patients.

In general, the PERFECTED researcher described SIL1 as "keen yet nervous", which was similar to how I viewed her. They also described SIL1 as being well organised and focused on the implementation process, but highlighted that she sometimes used "creative interpretations" of the checklist elements in order to achieve adherence scores for her site (the researcher's reflective notes suggest they thought SIL1 was generous in her scoring, as the baseline scores for Hospital 1 were very high). As in my own observations from meeting SIL1, the PERFECTED researcher describes SIL1 as being anxious about the pathway content, concerned that staff will not attend her meetings, and worried about "getting into trouble" with the PERFECTED team for feeding back criticism.

SIL1 also kept her own field notes, observations and reflective notes throughout the process. At the early stages of WP2 (October 2015), her notes reflect her inexperience with a ward-based working environment, and her unease and self-consciousness about being the role of an observer. She states feeling like "an inconvenience", that she felt the need to "justify" her presence on the ward, and that she felt anxious. However, she also reflected on this, aware that she had to be "comfortable feeling uncomfortable" in order to fulfil her responsibilities, and that when she explained to staff her purpose on the ward, they "seemed to calm and understand".

4.7.3.2 SIL1 Interview 1

My first round of formal interviews took place in March 2016, after the SILs had been in post for approximately six months. I had hoped to conduct these initial interviews earlier in the research period, but due to ethics clearance and SIL availability, this was unfortunately not possible. Although this delay was unavoidable, I was able to mitigate against it to a certain extent in two ways: firstly, by asking SILs retrospective questions in this first interview (i.e. asking them to remember back to when they first began in the role), and secondly by referring to secondary data, such as the SILs' reflective journals, and observations and notes from SIL teleconferences. I conducted the first round of interviews in a quiet room at SIL3's hospital site.

The Research Process

After telling me a little about her background and describing her work environment, SIL1 described how she came into her role. She expressed some early unwillingness and self-doubt in her suitability for the role within the PERFECTED project -

> *"I was just looking for a new challenge and this came up…I had seen it advertised several times before but it wasn't a very appealing advert…you're not really quite sure what you're letting yourself in for…"*

Part of this hesitation is borne from SIL1's unfamiliarity with the role and the project – an uncertainty which she shared not only with the other two SILs, but also with me as there were many elements of the PERFECTED research process I didn't fully understand at this point. While SIL1 may have possessed all of the necessary skills and knowledge to execute her role effectively, these were mediated by her own self-doubt. Although this type of project was a new venture for SIL1 and her hospital ward, she was able to see both the positives and the negatives to this situation, as it was a lot of responsibility but also an excellent opportunity -

> *"…what's nice is that my site, we've not really done research like this before, it's all new, so nobody else has done it, so basically I got given it and they said "make it your own – the success of this rides on you and how you take it through and embrace it", there was no pressure at all, no [laughs]"*

SIL1 saw the project as an opportunity, albeit a daunting one, to make a real and meaningful difference to practice on her ward. While SIL1 expressed a lack of experience coming to her role, she did discuss some previous experience of working with Enhanced Recovery models before in her role in theatre, but this seems to have built her up with expectations that were subsequently not met, leading to further uncertainty -

> *"I've done this before in theatres…I was kinda like thinking right we're going to be given this and it's going to be quite like that? So it's going to be quite structured in how we do it but it's not like that at all."*

…expectations

Her previous experience maybe gave her unrealistic expectations of what was a pathway essentially still in development, intensifying feelings of uncertainty, and feeling that there was a lack of structure. She had expected that by the time she was in post, the ERP would be finalised, and her role would be solely that of implementation, and collecting data about the levels of adherence. Instead, she expressed that she felt she had taken on a greater responsibility than she had initially expected, as she did not realise initially that she was expected to feed into the ongoing development of the pathway. She found the process of feedback frustrating at times -

> *"Frustrating. Sometimes I feel like I'm banging my head against a brick wall… I thought it was going to be more dementia specific…that's been the most frustrating part. Just trying to say "well actually, it's…I don't think it's robust enough"…. I think they just think that I just hark on about it for the sake of it."*

SIL1 was expecting specific elements on the ERP checklist to have an explicit focus on patients with dementia, and was disappointed to find that the checklist appeared to her to be "general". She spent a large part of her time in the role pushing for the checklist to have a more specific dementia focus. This was reflected in the ethnographic field notes taken by PERFECTED researchers, who observed in the action-planning meetings that both SIL1 and the ward staff members present at those meetings felt PERFECT-ER was too "generic", many of the elements were "simply standard care" and not specific to patients with dementia. I speculated that her conceptualisation of the ERP meant that she lacked a full understanding of the ERP and its rationale (context), which may have inhibited her ability to act as a central contact regarding the ERP (mechanism). This may have had implications for the way in which ward staff understood the ERP, and their roles in implementing it.

…identifying problems

Despite expressing these feelings of disappointment and frustration regarding the content of the checklist, SIL1 was hesitant to communicate these feelings to the PERFECTED research team. She mused on this as being partly to do with her early feelings of uncertainty regarding her role and duties -

> *"In the beginning it was difficult. Because obviously you're never done it before, you've got to find your feet, you're gonna have problems, you're gonna come across things that you just never thought of…"*

A major problem for SIL1 was defining her own responsibilities, and navigating the complex relationships that came with the role: not only did she have to work collaboratively with a broad range of staff on the ward, she also had to provide feedback on the pathway and the process to the PERFECTED research team. She discussed at length the internal conflict between her sense of duty towards improving patient care, and her concern with offending or otherwise upsetting others by raising criticisms of the pathway design.

> *"Sometimes I think, am I gonna offend anybody by saying this? Or am I overstepping the mark?... am I saying things out of turn?"*

This was also reflected in the field notes taken by PERFECTED researchers, and despite reassurances from the PERFECTED team, SIL1 seemed preoccupied with fears that "she would be in trouble from UEA regarding her feedback". Negotiating the complex network of professional relationships was a key challenge for SIL1, as she struggled to balance the responsibilities of her role with her duties as both a member of hospital staff, and a member of the PERFECTED research team. Although this was related to the research process, and not directly to the process of implementation *per se*, this

ongoing focus on SIL1's self-confidence (and how it inhibited her actions) suggested implications for her ability within her role as a change agent.

…managing challenges

At this early stage in the process, SIL1 was still exploring the boundaries of her role. She was conflicted, and agonised between doing what she felt would be most beneficial for the patients affected by the pathway, and forging an identity as an accepted member of the research team. Her role as SIL meant that she was having to navigate a broad range of professional relationships, and at times she struggled to maintain a comfortable balance. Her sensitivity to others often meant she found herself in a stalemate: she felt unable to act as she was concerned not only of damaging her relationships with the people she was working with, but also was concerned that it was not her place to make these criticisms.

She also reflected on how the research project reflected directly on her, as a co-researcher in the project, and as a mediator between the hospital and research teams. She expressed an attitude of personal and professional pride in the work that she was doing, and felt a sense of responsibility in shaping the ERP to reflect her own values regarding best hospital practice -

> *"I think, if we put that out to the hospitals at the moment… I wouldn't be comfortable with it."*

This drove her to make the decision to speak out about her concerns to the PERFECTED research team – she saw the pathway as being a personal reflection on her as a healthcare professional, as she was inextricably linked to this project. She felt personally responsible for doing whatever she could to maximise the potential benefits offered by this change in practice. She decided that the benefits to the "bigger picture" were more important than potential animosity from her colleagues and peers.

Ultimately, she followed her sense of duty, as she felt the potential benefit to patient care was more important than being diplomatic, although she remained concerned with how this would be received. However, this self-conscious attitude towards her own decision making and input to the project was a theme that recurred throughout her narrative.

…the importance of context

At the start of the research process, SIL1 was self-conscious of her lack of ward experience, and it was tempting for her to simply follow the example set by others (I assumed she meant the other two SILs, given the context of the discussion) –

"…In the beginning I kind of wanted to conform, and do what everyone else was doing…"

She soon realised that, as her personal background and specific ward context differed from her peers, this was not a practical approach, and wouldn't result in the best possible outcomes –

"I need to do what I want, because I'm me…I need to do what's best for me and my hospital…Stop worrying about everyone else and get on with what you're doing. Stop trying to be like others cos you're not them. We have different challenges and face different things."

I admired this insightful reflection: although she repeatedly expressed anxiety about being "the odd one out", she was able to appreciate that this position meant that what worked for the other SILs might not be the best approach for her, and sought to approach challenges in her own way.

SIL1 also highlighted specific contextual differences related to her ward, which created challenges in completing the PERFECTED ward audits –

"…a lot of the issues we have is because our trauma ward is, we have to have spinal beds and we have to have certain patients on there. So it comes down to a point where they look at patient need and sometimes they just can't…like one cycle I had 15 outliers, or 15 patients I could've included in the project, but I couldn't because they didn't start their journey off on my ward. So like I said every single cycle, I am the one who comes up with "this might happen"…"

SIL1 highlighted again how she faces unique challenges, and seemed to me very self-conscious about the fact that it always seemed to be her reporting problems to the research team. She perceived her position as significantly more challenging than that of the other two SILs. This was also reflected in the way that she spoke in teleconferences (regularly held as a way for SILs and the PERFECTED research team to share updates and feedback): researcher notes reflect that SIL1 seemed "unsure" and "uneasy" in comparison to the other two SILs, and highlighted her lack of ward-based experience as a possible reason for this.

Being part of a team

...valuing different perspectives

Although she had strong views about the content of the ERP, SIL1 demonstrated self-awareness that she had gaps in her understanding and experience, and actively sought input from others. She valued the support offered to her from her PPL in particular (as discussed above), but also sought to

collaboratively problem-solve with her ward colleagues through the "action-planning" process. When it came to arranging the "action-planning meetings", she stated that this was another thing she did differently to the other two SILs, being selective in who she invited to participate in the discussion –

> *"I don't invite every…man and his dog along. One, I don't think it's necessary…My personal view is I need key people who can make, influence the change. So, it doesn't mean I'm not keeping involved….because I have a board in the staff room and I ask for suggestions…but in the meetings I like the sisters of the ward, I have like the dementia team, those are the kind of people I invite along to have input into it, because I think if I'm going to be influencing the change, they're the kind of people who I need to be on board…"*

I was impressed by SIL1's practical approach to arranging these meetings: her selective inclusion of staff suggested that she had a strategic approach to problem solving, and by inviting "key people", she was able to keep the numbers in attendance to a manageable level. However, I did have some concerns, as this approach may have caused certain staff groups to feel excluded from the process. In particular, non-qualified staff (such as healthcare assistants) are often overlooked when it comes to implementing change, despite the fact that they constitute a large proportion of ward staff and deliver valuable patient care. SIL1 does provide a justification for her selectiveness –

> *"…I've gone top downwards. But it doesn't mean that the people at the bottom aren't, like who's doing it every day, aren't as important as the people getting the buy in, but the only way the changes can happen is if you take them further, because you can take them to the ward level, and you can speak to staff nurses, HCAs, domestics, pharmacists, that's fine, but they're not the people who can actually get the change implemented…"*

Given the findings from my earlier literature review, I was still concerned that SIL1's approach might overlook the valuable input that could be given by "people at the bottom". Not only would they have insight into practical day-to-day working on the wards (which, by her own admission, SIL1 did not have insight into), but involving these staff groups in the discussion could provide an opportunity to address any potential staff-level barriers to implementation, such as resistance to change or a lack of understanding. By restricting attendance to action-planning meetings, certain staff members may have felt less valued (context), which may have affected their motivation and engagement in the implementation process (mechanism). These staff members would also have limited opportunities to engage in and contribute to multidisciplinary discussions (context), having implications for

discussions between staff groups about the ERP process (mechanisms). Both of these scenarios will have had implications for achieving ERP adherence (outcome). I discuss this issue more fully in **Chapter 5**.

….working with others

SIL1's lack of ward-based experience and pre-existing relationships with ward staff was an important contextual difference for her, as it meant (unlike the other two SILs) that she had to invest time and effort to gain an understanding into the day to day workings of the ward, and the complex network of relationships that this entailed.

> *"…obviously I had to build relationships with the ward staff, I had to build relationships with the dementia team, I had to do all of that, plus going into a new role as well…"*

One existing relationship (from her theatre background) that aided and supported SIL1 in the early stages of her role was with her site PERFECTED Programme Lead (PPL), a surgeon that she had worked for as a scrub nurse and first assistant for many years. He acted as a reassuring presence for SIL1, and gave her valuable confidence in pursuing her goals and ideas within the process –

> *"…I didn't then need to have to build a relationship with him, because he was already there, very supportive, and I've got an open and honest relationship with him, that I can say what I think to him and he doesn't judge me. And he will listen, and sometimes he'll argue back, but we have that relationship where we can be open and honest with each other…"*

This strong, pre-existing professional relationship was a key factor in SIL1's personal context which shaped her approach and problem-solving process in implementing PERFECT-ER.

Despite her trepidation regarding building new professional relationships in an unfamiliar setting, SIL1 demonstrated a very practical attitude towards this. She saw herself as a "project manager", and needed to be able to liaise with the appropriate people in order to implement the changes she was responsible for (as demonstrated by the way she ran her "action-planning meetings").

She identified this initial in-roads as one of her biggest challenges, but was determined to overcome it, as she knew it was an important factor in implementing PERFECT-ER –

> *"I think one of my biggest challenges was being accepted by the ward. That was difficult in the beginning. But it's just about making yourself known and being*

present…and try and integrate into the team and keep people updated and involved…"

Once she began making her presence known on the ward, she found the hospital staff engaged, motivated and welcoming, and good working relationships were easy to establish –

"…obviously they see me coming in and I'm trying to make these changes and, but once it was like I'd got in there and I'd said to them I'm not here I'm not like evaluating your performance, it's nothing to do with that, like now I'm just accepted…everybody is [engaged] and it's really surprised me…"

Her persistence bore fruit, as SIL1 found the staff at her hospital were overall willing to work with her in achieving their shared goals. She felt comfortable approaching staff and knew who to go to for advice and guidance. However, she still strongly held the view that she was "an outsider".

Sense of Identity

…as an outsider

SIL1's concerns and uncertainty extended beyond the responsibilities of the role. Early on in the interview, she discussed her feelings of "seperatedness" from staff on the ward, a subject that she returned to frequently throughout the research process. At this early stage, SIL1 was still exploring her identity within the role, where she felt she belonged, and what she brought to the proverbial table. She seemed acutely aware that her different professional background (as a theatre nurse rather than a ward nurse) affected her experience in, and approach to, the role. SIL1 compared her own experience to that of the other two SILs, mainly highlighting the differences between her and them -

"…my role and how I see myself and what I do, because I'm not embedded in the ward I'm not part of say their team as such, yeah I do things a bit differently to the other two [SILs]."

This feeling of isolation was also reflected in her early reflective notes: she describes undertaking her first round of ward observations in October 2015, and describes herself as feeling like an "inconvenience", as the ward staff were clearly very busy with their duties, and she was ostensibly standing on the ward, not offering any assistance. She was concerned that ward staff would feel threatened by her presence, as she may have been seen as judging their practice. She felt the need to explicitly explain her presence on the ward, and the purpose of her observations, in order to reassure staff, and she acknowledges in her notes that she felt under constant pressure to "justify" herself. Relating this to my programme theory of change agency, SIL1 at this stage lacked a good

rapport with the staff she was working to coordinate (context) and this may have inhibited her ability to work cooperatively with them to identify and manage barriers to implementation (mechanism). However, I anticipated that over time, as SIL1 became a more familiar presence on the ward, she would be able to establish a better rapport with staff, and improve collaborative working with them.

Her position as an outsider was not always framed as a negative attribute however as she explained that her background outside of the ward allowed her to "see things a lot more objectively". She discussed at length how she felt that, as they had a background of ward working, the other two SILs were personally affected by what happened on their wards. She argued that their "investment in the ward" caused them to have conflicting priorities, and they were not always able to view the implementation process objectively. SIL1 explained that, without a pre-existing investment in her ward, she is able to make PERFECTED her primary focus –

> *"I can buy into it more because I don't have that personal attachment…I don't see it as a reflection on me as much…So what I'm doing I'm passionate about, well obviously…but what we do on, like what they do on the ward, I don't take it personally, because I don't have that….whereas I think the other two [SILs] might take it a little more personally, because they work there every day."*

Although she does at times feel isolated and lonely in her position, the fact that SIL1 was able to identify practical benefits to this spoke highly of her pragmatism and ability to self-reflect.

…as a member of a team

SIL1's sense of belonging plays an important role in her narrative, as she frequently discusses her relatedness to other teams, members of staff, and the other two SILs. At times she identifies as part of the SIL group, and at other times highlights her difference from them.

> *"…first of all I thought it was just going to be with the ward but actually it's not… actually the people who can actually make the influence and make the changes on that kind of side actually come from outside, and then you take it to the ward and we kind of go as a team. I have a very different approach to the other two girls [SILs]."*

This different approach is demonstrated by her strategies in implementing change, both in the case of selectively inviting attenders to action-planning meetings (as discussed earlier), and through the involvement of staff who are peripheral to the ward (as she feels she is), rather than directly through ward staff themselves -

"…the biggest people I have most engagement with are the dementia team, not so much the ward staff… I've kind of liaised with those… I'm actually known as part of their team now, I'm like a little add on, wherever they go, I go."

SIL1 seems to be surprised by this source of change, and from this develops a top-down approach to implementing the ERP, influencing change from the outside (whether through these peripheral teams, or via higher management). Like SIL1, these teams are not directly part of ward staff, and yet are able to have a real and meaningful impact on how the ward functions, and perhaps naturally, SIL1 identifies as a member of their team. In doing so, she distances herself further from the ward staff, and increases her feeling separate from the other two SILs.

Sometimes, she identifies as part of the PERFECTED research team, and other times she notes a very clear delineation between the SILs and the broader research team (describing a "them/us" scenario). Her sense of belonging, particularly at this stage in the research process, was unstable, and she frequently switched between various pronouns and group identifiers, i.e. "me", "I" versus "we", "us", "them", "they".

"…my role and how I see myself and what I do….I'm not embedded in the ward, I'm not part of their team as such…"

However, despite this struggle with belonging and a sense of identity, SIL1 has established herself as a known presence within the ward -

"they know who I am, I walk on they know what I want, they know what I'm up to… a lot of people approach me asking about the study, you know, asking how we're going, how we're doing."

Not only is she visible and known to staff, she is also seen as approachable, and ward staff are interested in the project she is co-ordinating, and motivated to be involved. SIL1 has established an open dialogue with staff, and despite her ongoing concerns and self-doubt, has asserted herself as a figure of authority. PERFECTED researcher notes from the action-planning meetings also reflect this, but often at the expense of the ongoing relationship between ward staff and the PERFECTED research team: SIL1 established her identity as part of the ward "in-group" partly by distancing herself from PERFECTED. SIL1 was noted as describing the research process as "extremely unfair" in the way it reflected the performance of ward staff, and this was met with agreement by the staff members present. Relating back to SIL1's earlier remarks regarding her advantageous position of "not being imbedded in the ward", I wondered how true this still was: in an effort to develop a rapport with staff, she appeared to compromise her objectivity. It was at this stage that I began to

consider if there was a "happy medium" of ward embeddedness that a change agent must achieve in order to execute their role effectively. A good rapport with staff signified an important contextual element in triggering generative mechanisms relating to collaborative problem solving, but in this scenario, it appeared to have negative implications for SIL1's understanding of the ERP and its rationale. This may have had subsequent effects on the extent to which the ERP was implemented in practice.

…as a victim

Despite at times identifying with different teams, overall SIL1 felt isolated from the ward staff and her peers: she was in some ways, a victim of her own position, as not only was the role of the SIL an intrinsically lonely role, but she was also the "odd one out" of the SILs, coming from a theatre rather than ward background. As mentioned above when discussing the subtheme of "the importance of context", SIL1 perceived her experiences as more challenging than that of her SIL peers, taking on a victim role ("it's always me", "there's always something with me"). Her feelings of frustration and isolation had negative impacts on her self-esteem and sense of self-efficacy, to the point where she didn't feel as though she was able to make positive contributions to the research programme –

> *"I was very downhearted in the beginning, because I felt so different and that my contribution wasn't going to be as valued as much as them two, because…it was how I was seen by others…"*

This personal struggle escalated to the point where she felt unable to continue in the role, and considered resigning from her position –

> *"…that really did bother me in the beginning, I actually nearly left, very, in Cycle 1…"*

I was concerned that SIL1 failed to appreciate that the other two SILs faced challenges of their own, particularly related to navigating the research process. I hoped that in time, as her relationships with the other SILs developed, she would be able to appreciate that she wasn't alone in her struggles, but that managing these challenges was part of the process.

Reflections on SIL1's first interview

I was struck by how readily SIL1 wanted to express her experiences with me, and she appeared to have no difficulty in discussing openly some of the challenges she had faced, including her own limitations. SIL1's use of pronouns was inconsistent, sometimes speaking of personal experiences in the second rather than first person. I wondered if she was self-conscious of the struggles that she was experiencing, and wanted me to be able to relate or empathise with her situation by saying

"you". This, paired with her very open and detailed reporting of her experiences, gave me the impression of SIL1 as an eager but self-conscious individual, anxious to be seen, understood, and appraised as worthy.

Throughout the research process to this point, SIL1 had spoken extensively about how her situation was different to that of the other two SILs, and the other SILs noticed this difference too. SIL1 sometimes viewed this difference as challenging or problematic, but increasingly she justified it as a position of strength, creating epistemic distance between her and the staff that she is trying to influence to change. She is not "embedded" in the ward, and able to see the situation and any challenges more objectively.

The other SILs viewed SIL1's position as potentially a weakness, for the same reasons: SIL1 is not sensitive to some of the real challenges faced by ward staff. As SIL1 doesn't have any direct experience of working as a member of ward staff, she lacks insight into their experience, and is therefore not able to relate so closely to them. This is discussed in depth in section **5.6**.

I think SIL1 was partly self-conscious of this, too. She seemed to feel the need to constantly justify her position. She spoke of the "value" she brings to the role, and questioned her worth, suggesting that she had a low sense of self-efficacy. This was certainly reflected in her actions, as she hesitated to provide honest feedback to the PERFECTED research team, wary of whether her criticisms were valid, and how they would be received. This hesitation also showed that SIL1 was sensitive to the feelings of others (she didn't wish to offend the researchers by speaking negatively about something which she knew they had put a lot of time and effort into designing) and conscious of the importance of maintaining good working relationships with the teams she worked with. She struggled to balance the maintenance of these relationships with providing what she felt to be important constructive feedback, almost to the point of inaction.

My opinion of SIL1's position was also informed by my examination of the secondary data from PERFECTED WP2, and discussions with PERFECTED research staff, which revealed that they perhaps suspected SIL1 overplayed the successes she had in implementing the ERP on her ward to some extent: she wanted to be seen as succeeding in this role ("it rides on you" etc.), and by her own admission, certain elements of the checklist are ambiguous and could, to a certain extent, be manipulated.

I felt a great deal of sympathy towards SIL1 as I remember in the early stages of my PhD, I also wanted to be seen as capable and productive by my supervisory team. I later came to realise that I needed the motivation to come from my desire to produce meaningful research, rather than a

desire for approval from figures of authority. It was at this stage in the research process that I began to consider the importance of a good sense of self-efficacy in goal achievement.

4.7.3.3 SIL1 Interview 2

My second round of interviews took place at a quiet room at the UEA. SIL1 was more focussed, and less pre-occupied with her feelings of uncertainty and self-doubt than she was in her first interview. She spoke freely and at length as before, and I had no difficulty in keeping the conversation going, although at times she became overly-focussed on certain topics and it was hard to move beyond them.

After a brief overview of progress since we had last met, SIL1 discussed some of the challenges she had faced in implementing the pathway, but also about the meaningful input she had in developing the pathway –

> *"We've managed to get some points changed, we've managed to get some points added in, so some points we just thought were not really-, not obtainable, but they didn't reflect what we though that should be happening."*

SIL1 had recognised by this stage that certain changes are outside of her influence, and therefore not worth pursuing. She had instead devoted her energies towards resolving issues that she *could* influence. Although being involved in change had given SIL1 confidence in her competence, it had also been a source of frustration for her, as she felt she wasn't always listened to –

> *"…I've said it every single cycle since, but it just seems to fall on deaf ears…"*

Or that the process of change was too opaque or moved too slowly –

> *"…that's how we started the process, and I don't know what happens to it once it goes to [the research university] but it did get changed for the next cycle…but it was a slow process…"*

However, when I compared her discourse here to that in her first interview, I observed notable changes in the way she talked about this process of feedback and change. She no longer seemed apologetic about providing this feedback, and her pursuit of effecting change was persistent and tenacious, despite her frustration. She also spoke about the changes achieved in terms of "we" rather than "I". I interpreted this as representative of a shift to in-group identity, and collaborative team working with her ward colleagues. As I anticipated earlier in the process, she had developed a better rapport with staff (context), allowing her to work more effectively with them (mechanism) in

achieving ERP implementation (outcome). It was not clear whether her increased self-confidence helped her to establish this rapport, or was a result of it.

Being Part of a Team

…working with others

Using the pronoun "we" when discussing the changes made, SIL1 referred not just to the changes she had influenced, but had been working collaboratively with the others to achieve. This was also reflected in SIL1's weekly reports to PERFECTED at the time, describing discussions with other members of staff that "went well and were well received". By developing better relationships with her colleagues on the ward, not only was she able to solicit useful input and ideas from them, but she was in a better position to garner their engagement with the project, which she realised was an integral part of implementing change –

> *"…you also need people who are enthusiastic about it and want to make those changes cos you're never gonna make changes if people just aren't invested in it…Everybody's been really happy and enthusiastic and wanted to get involved and be a part of it."*

I saw this indication of collaborative working as a positive turn for SIL1, as she had spent a large part of her first interview discussing how isolated and separate she felt. In some instances, she had been working with her PPL to problem solve (as discussed in her first interview, SIL1 had a good relationship with her PPL prior to working on PERFECTED, as she had been his scrub nurse in theatre), and he had given her confidence in her decisions –

> *"…I have a pre-action-planning meeting with my PPL. So we went through it and we discussed it, and he agreed with me that the suggestions that we've come up with…"*

At times this "we" referred to SIL1 and her PPL, or SIL1 and her colleagues on the ward, but for the most part, the "we" referred to SIL1's collaborations with the other two SILs, and indicated the developing relationship between these three women. They offered each other peer support, a space to problem solve, and mutual support and guidance. They also lent each other confidence in approaching the PERFECTED research team with their feedback and suggested pathway changes –

> *"…we initiated the change, said "all three of us think this, this could possibly be reworded"."*

This collaborative working between the SILs was also reflected in the field notes taken by the PERFECTED research team, stating that they "are working more closely together". Although this has positive implications as the SILs can support and empower each other, the PERFECTED researcher also noted that they felt the SILs collaborated to "confront" the PERFECTED research team, and this developed a "them and us feel" to discussions.

…valuing different perspectives

This relationship between the three SILs was an important source of self-affirmation, especially for SIL1: at the start of the WP2 process, none of the three SILs had ever been employed in this type of role before, and as a result had a shared anxiety about "doing the right thing". By communicating and meeting regularly to discuss their experiences and any challenges they had encountered, they were able to reassure one another that the issues that they were having were not necessarily a fault of their own shortcomings, but a product of the complex process they were involved in. They were able to build each other's sense of self-efficacy by working collaboratively to resolve shared issues, and highlight certain challenges that were simply outside of their influence.

However, as well as being a positive bonding experience which helped SIL1 create a sense of in-group belonging, these experiences also intensified her feeling of distance from the wider research team. By identifying with clinicians working "on the shop floor", she conceptualised researchers as being slightly out of touch with the reality -

> *"…they're academics, we are in clinical practice….we work with the realist, they work with the ideal."*

SIL1 discussed this in detail, stating that some of the elements on the checklist were "never gonna happen", due to a lack of resources. Despite a high level of motivation from ward staff to implement the requested changes, certain elements were simply not realistic, and SIL1 expressed frustration at being asked to make changes that she viewed as being impossible. At this level, change was impossible due to a lack of opportunity: regardless of staff willingness or competence to do the things asked of them, structural barriers prevented the change from being possible. Despite staff feeling valued and supported (context), which increased their motivation and engagement with the ERP implementation process (mechanism), they were able to identify practical barriers to adherence, but did not have the resources to overcome these (outcome). Although the staff consultation process was an important mechanism of achieving change, this was mediated by organisational and structural barriers that were beyond staff control.

…managing disagreements

SIL1's second interview identified a "them vs. us" dichotomy that had also been described by the PERFECTED research team. As she began to more strongly identify as part of "the SIL team" and gain greater insight into the experiences of her ward colleagues, SIL1 increasingly saw the research team as unrealistic or obstructive. She was still engaged with the PERFECTED research process and aware that she had to maintain good relationships with the research staff, but began to disagree with some of their decisions, and found communication could be frustrating –

> *"…it just seems to fall on deaf ears….they listen to you and they want your ideas and things which is fine, they do take them on board and I think we have shaped the checklist to be more usable and reflect practice. But there's just some other things that I-, if they've got that in their mind that they want there or that's there for a reason, even if it is completely unobtainable or unrealistic, if they want it there it's gonna be there."*

In instances where SIL1 disagreed with the research team or the research process, the peer support offered by the other two SILs was invaluable. They often shared the same disagreements, and they supported each other in liaising effectively with the researchers. However, I wondered to what extent this affected her understanding of the ERP and its rationale: as the SILs developed their own concepts around patient care, these diverged from the pathway as prescribed (context), limiting the extent to which the SILs could act as central contacts for PERFECT-ER (mechanism), and limiting the extent to which the ERP was implemented as designed (outcome).

The Research Process

…identifying problems

SIL1 talked about how her own lack of knowledge became a barrier to certain checklist items from being met –

> *"…at the action-planning meeting I said look, we've scored nothing on this. Well, why?...and our dementia lead said actually [SIL1] this is what this means, so after that, that was just my lack of understanding of where to find the information."*

Although SIL1 openly admits to her lack of ward experience and how this has made the research process challenging at times, she overcomes certain short-comings by having an open and easy dialogue with staff. She freely admitted that she had certain weaknesses due to her background, but viewed the implementation process as a group learning experience -

"…that was just like the baby steps we took right at the beginning, there was lots of teething problems…I was getting to grips with the paperwork or that kind of thing…"

SIL1's dialogue was more matter-of-fact than in her first interview, and she seemed to have come to terms with the fact that certain factors were simply outside her control. Rather than being distressed by this (as she seemed to be in her first interview), SIL1 gave me the impression that she had accepted that certain things were not worth losing sleep over –

"If it's an organisational issue, and you need money or input or change of staffing, you're just not gonna achieve it…some things you just need to know when to let go…"

…managing challenges

However, even with issues SIL1 has seen as completely insoluble, group discussion has identified possible workable solutions. These insights would not have been possible if SIL1 had completely given up on the issue, and had decided to not open it up to the ward staff for their input –

"During the last action-planning meeting, just when I'd given up all hope….we've got a new therapies lead, and he came in and he come up with a brilliant suggestion…he's obviously gone away and thought about how we can do it…"

This highlights the importance of an open dialogue with staff, and the insights gained from involving a broad range of staff in the implementation process. Here, SIL1's open and honest acceptance of her lack of knowledge and experience (context) has a positive outcome: by soliciting advice from others (mechanism), she opens the door to new ideas and creative input (outcome).

…expectations

Following on from this, SIL1 raised concerns about the future of the pathway and its long-term sustainability –

"…there's just gonna be nobody there doing that job, driving, being that driving force behind it, because the ward sisters don't have the time, everybody's flat out…"

This was a real and valid concern for SIL1, as by the end of the twelve-month research process, she would have expended huge efforts to implement a pathway which she had a hand in developing, in order to improve patient care. She had spoken several times about how she felt a sense of professional responsibility in implementing the best possible pathway that she could, and it seemed

clear to me that she took a great sense of pride in what she had achieved so far. However, the fact that she had to work so hard to ensure adherence to the pathway highlighted for her the importance of the SIL role in driving and coordinating this process. The unfortunate implication from this was that, without a SIL in place, the ERP agenda would no longer have a driver, and adherence could deteriorate, if not fully revert back to previous practice.

She saw her current position as pivotal in getting the process of implementation started, but at this stage in the process, had no suggestions for how it could be maintained in the long-term. She had hoped that she could find individuals to take on the responsibility beyond her time in post, but was adamant that this needed to happen organically –

> *"I don't want to give it to people who don't want it. I want to give it to people who want it because I want them to take ownership of it and take it forward….I want somebody to say "I want to do this because it's important to me"…"*

This is also reflected in her own field notes from this time, explaining that she had spoken to members of the Dementia Liaison Team to solicit ideas from them regarding ongoing progress, beyond her role. Although I understood her rationale for this, I was concerned that the existing responsibilities of staff would discourage the sort of self-nomination she was hoping for.

…the importance of context

As in her first interview, SIL1 reflected that her situation was "very different" from the other two SILs, and this affected her approach in implementing PERFECT-ER. In contrast to the first interview, she realised that anyone coming into the role of SIL would have a unique background and perspective, and would need to approach pathway implementation in a way that best suited them and their hospital –

> *"We were given the checklist, told to check, to find out, but we've all got very different sites so it was finding out own way, and I think that's what the new SILs are gonna have to do, don't worry about what other people are doing…it's just about finding your own way…what works for your Trust, because I think if I'd adopted some of the other ways the girls work, it wouldn't work at my Trust…"*

Although SIL1 valued the support and guidance from her SIL peers, she had come to realise by this point that she needed to work with the skills and resources she had to implement the pathway in a way which was most appropriate for her specific context. She had different relationships with staff and different resources at her disposal, which she utilised to her advantage –

"…I've had a very high input from my PPL, I know the other two [SILs] haven't, and I, for me that's worked really well. But that stems from my relationship with my PPL goes back ten years…and he wants to be involved."

Sense of Identity

…as a team member

SIL1 had further developed the relationships she had discussed in her first interview, and despite her ongoing feeling of "difference", strongly identified as part of the "SIL team". In fact, she had learned that recognising and accepting contextual differences was a fundamental part of developing an effective implementation strategy –

"…we've all got very different sites so it was finding our own way…"

As in her first interview, it seemed to me that this increasing bond between SIL1 and the other SILs was serving to intensify a potential divide between the SILs and the research team, as the SILs individually found elements of the research process frustrating, and by sharing their frustrations with each other, gained courage to challenge the research team on certain decisions –

"…we initiated the change, said "all three of us think this, this could possibly be reworded"…we think this would better reflect practice…"

Although this approach meant that the SILs were able to support each other in getting what they felt were meaningful changes made to the pathway, it also furthered the "them vs us" mentality discussed in her first interview –

"…they're academics and we are in clinical practice. We work with this, and I've said this time and time again, we work with the reality, they work with the ideal….there's that barrier between…"

I found this particularly surprising for SIL1, as she was the "odd one out" of the SIL group, and had initially identified as being more research oriented than her SIL peers.

…as a victim

Although less prominent than in her first interview, SIL1's second interview did again touch upon how she felt like a victim of her own position. As well as still feeling like "the odd one out" (although she was coming to terms with this), she expressed ongoing feelings of not being listened to, not feeling valued, or feeling like a nuisance to her colleagues –

"What I'm there for! Apart from to get on everyone's nerves? That is what I do mostly!"

The tone in this interview was different from her first interview though: she made light of the fact that she got "on everyone's nerves", and conceptualised it as a necessary part of the job, "to raise the PERFECTED profile". In order to do her job effectively, she saw it is important that she was persistent and tenacious, even if this meant she sometimes got on her colleagues' nerves. She was still adjusting to this, however, and it came at some personal cost –

"…I lost heart quite, in the middle, because I was like you're just missing the point….when I said it, I kind of felt like I was throwing myself out there, I was just throwing myself under a bus, because I felt like I was criticising people's work, and that wasn't what I was doing…"

As mentioned in her first interview, there were times when SIL1 was so disheartened by the process and her position that she considered resigning from her post –

"I said to my boss in, back at my site, I don't-, if this went out now, as is, checklist two, I don't wanna be a part of it. That's how strongly I felt."

Her sense of self-efficacy had suffered to the extent that, despite her adequate skills and knowledge, she was inhibited from performing in her role effectively. This again highlighted for me the way in which self-efficacy interacted with other contextual factors to change agent effectiveness: despite gaining a good understanding of the ERP, and possessing good management skills (context), her low self-efficacy inhibited her ability to work proactively with colleagues to implement the ERP (mechanism). However, the network of relationships she had established gave her the support and courage she needed to persist with her aims, and her tenacity eventually paid off, giving her the motivation to continue –

"…by the third cycle, somebody listened to me. And we had a meeting….they finally got the picture of what I was harping on about…we had a break through, I think it could be more but I'm happy with what we've done….So that was my victory."

The PERFECTED research team also provided SIL1 with support and guidance, as field notes from this time report that she was in regular contact, discussing concerns and anxieties that she had regarding completing the checklist and the value that she was able to bring to the process. PERFECTED researchers were able to reassure SIL1, and I believe this acted to increase her sense of self-efficacy,

giving her the necessary confidence to enact her duties effectively. This highlights the importance of effective supervision and support in triggering necessary generative mechanisms for implementation success.

…accepting limitations

This second interview signified an important shift in SIL1's sense of identity: a realistic acceptance of the limitations of her abilities and influence. Although in her first interview she had readily stated that certain things were "impossible", they had still been a source of anxiety for her, and she became preoccupied with scoring highly on the ERP checklist. Here in her second interview, she spoke matter-of-factly about organisational barriers to change –

> *"…resources. If it's an organisational issue, and you need money or input or change of staffing, you're just not gonna achieve it. Because if the money's not there you can't make money. And if the staff aren't there you can't make staff. So some things you just need to know when to let go."*

I reflected on how significant this change in SIL1's attitude was, as at the start of the implementation process she had invested a lot of time and energy into trying to address all of the elements on the pathway. She herself reflected that this was effort that could have been better spent elsewhere, and she had become needlessly frustrated pursuing insoluble problems –

> *"…I have been banging my head against a brick wall…"*

Compared to her first interview, here SIL1 focussed less on the barriers she had encountered, and spoke at length about her achievements and successes in the role. This was also reflected in PERFECTED data from this time: where certain checklist items had scored consistently low throughout the process so far, other items were improving. PERFECTED researcher field notes from group teleconferences and SIL1's own reports demonstrate she continued to focus on soluble issues, improving ERP adherence where practically possible.

Reflections on SIL1's second interview

I felt an almost maternal pride in SIL1's developing sense of identity within the research project. Although she still saw the role of a SIL as a lonely one, and continued to express feeling separate from her colleagues within her hospital, her confidence in her own abilities had demonstrably grown. Her growing self-efficacy enabled her to work more effectively as a central point of contact regarding ERP issues. As in her first interview, SIL1 spent large parts of this second interview reflecting on her own personal development and how she had been developing relationships with others.

I found it particularly interesting that SIL1 was increasingly identifying with the SIL group, whilst simultaneously distancing herself from the research team. Of the three SILs, SIL1 was most closely aligned to research, and I had half expected to find she would naturally gravitate towards the PERFECTED research team as her "group". Instead, she began to highlight the differences between her own position and the research team, finding she related more with the other two SILs. Although she continued to highlight how she was very different from the other SILs, in terms of background and experience, she had a growing appreciation for how their different perceptions of the research process could be mutually beneficial. She was aware of her own lack of ward experience as a personal limitation, but gained insight and understanding from her peers. In return, she was able to offer advice and guidance relating to the research process, as she had more experience in this regard. I had the impression that being able to offer this to the other SILs played a vital role in her own developing sense of self-worth within the research process. I noted the positive impact this peer support had for SIL1's confidence, but speculated that it had negative implications for ERP fidelity (i.e. to what extent the ERP was being implemented as prescribed).

I was concerned about the issue of long-term sustainability, as SIL1 did not seem to have any plans in place for sustaining the pathway beyond her role. I thought it would be a great shame, given the amount of time and energy she and the staff had put into implementing the ERP, if the changes were not sustained beyond the lifetime of the project. I thought back to my background research on successful ERP implementation, and while long-term sustainability doesn't necessarily require a dedicated member of staff in post to continue driving the pathway indefinitely, a lack of considered planning ultimately results in a decline in pathway adherence over time. Although I did not feel this was directly related to my programme theories of ERP implementation, I believe it is an important issue worthy of further exploration.

4.7.3.4 SIL1 Interview 3

I conducted the final round of interviews in a quiet room at the UEA. The SILs were all on campus that day to give presentations of their experiences to the SILs employed for the next phase of the PERFECTED project, so I made use of this availability to reduce time demands on both myself and the SILs. As the PERFECTED WP2 research process was winding down at this point, there was less PERFECTED generated data available for me to use within my analysis, and this section of the narrative is predominantly informed by the SIL interview generated data.

The Research Process

…identifying problems

SIL1 began the interview stating things were "winding down" and things had "not been too hectic". She quickly changed the tone, expressing frustration at the research team for requesting the SILs conduct a final checklist at their sites –

> *"Not happy, no. Because when I got cycle 4 done, it was like, yes, we're done. And, I did bring up with like, [UEA researcher] gave me a reason why, which was fine, but I didn't agree with that reason why. They said it's because they want to see how the changes are maintained when we come out of our role. Well my argument is, we're actually still there…"*

SIL1 is frustrated not only because she had been asked to do another checklist after she thought the process had ended, but also because she doesn't agree with the research team's rationale for conducting this final checklist – she sees it as a pointless exercise, that won't really reflect pathway maintenance. I was interested to know her thoughts on this, as reflecting back to her previous interview, she was clearly concerned with the long-term sustainability of the pathway. She goes on to explain what she feels would be a better way of demonstrating pathway maintenance, and give more meaningful results –

> *"…they need to pull us completely away from it then. Don't have us still there in the background driving, handing over, doing the final pieces if you want to see how it works without us being in role, and if the changes are gonna stay."*

…managing challenges

SIL1 expressed strong views on how the research aims could be achieved, and she appeared to have no difficulty in discussing these directly with the research team any more. I was pleasantly surprised by this change in SIL1 – looking back to her first interview, in which she was full of self-doubt, and minimising her own experience, saying that she wasn't sure if she could make a meaningful contribution to the research project. She also reflected on some of her early frustrations, and how these escalated to the point where she considered leaving her role altogether –

> *"Last December, you didn't have a SIL at [Hospital 1]. There wasn't one. Wasn't coming back. Hated it. Wasn't happening. I was very, very adamant."*

However, following a discussion with her manager, and taking time to gain perspective and consider her original motivations for taking the role, she decided she wanted to continue with the project –

"I'm not gonna walk away from something just because I'm having a bad day…now I'm like, yeah come on, bring it on…I'm making those decisions for myself because I have that confidence in myself."

SIL1 in her third and final interview was someone who had grown in confidence and self-efficacy, with clear opinions about meaningful research practice, and the best ways in which to capture the data. She expressed her views to me with no hesitation, and spoke passionately about her opinions, showing a strong sense of pride and ownership in the project which she had become deeply embedded in.

That said, SIL1 was also aware of her duties as a member of the research team, and the limits of her influence and those of the UEA research team –

"[the UEA researcher] agreed with me, [they] took it back and they said, no, they've got to do it. Which is fine. I mean, I've just sucked it up…Like, when you question it, I kind of sometimes feel like they don't really know what to say, so…"

In earlier interviews, I would have expected frustration from SIL1 in this scenario. Now, she was more accepting of the fact that certain challenges were beyond her control. Instead of wasting energy on things she could not change, she did what was required, and focused more on meaningful changes that should could influence. This is also reflected in the PERFECTED research data, as in her own field notes, SIL1 highlights this late stage of the process has been "a pretty smooth process". Whereas previous, her narrative had been predominantly problem-focused and frequently expressed anxiety around her role and responsibilities, she now stated that she had "enjoyed the experience of being a SIL", and feels the process has been positive overall in regards to improving patient care.

…the importance of context

As in her previous interviews, SIL1 highlighted how her different background and setting affected her approach to the implementation process. She discussed how the other SILs were more "hands on" in managing the change process on their wards, but that she preferred to delegate tasks out to staff on the ward, and give them ownership of the change process –

"…for me it's been quite different cos I've not really been involved with my changes, I've had a different approach and I've been the facilitator, I've been the instigator, so I've identified the change that needs to happen, but in my meetings I've actually said "who is gonna take this on?" and I've just been there, and I will go and say "what is the update on this? How far have you got? Do you need any

help from me, do you need any input?". Most of the time I get "No I'm absolutely fine"."

This approach seemed to me to have two main advantages. Firstly, the staff on the ward had existing knowledge of ward processes and relationships with other ward staff, which SIL1 lacked, so they were in a better position to know how best to implement specific changes in their teams. Secondly, by giving staff ownership over the change process at this early stage spread the burden of responsibility for implementing and sustaining change, which would hopefully benefit the long-term sustainability of the ERP, beyond SIL1's employment in her role. Unlike the other two SILs, SIL1 would not be returning to a ward-based role after the end of the project, and could not be involved with sustaining the pathway beyond the WP2 process, so had to rely on permanent staff taking on this responsibility. Although SIL1 differed from the other SILs in her understanding of local practice and relationships with ward staff, she was able to develop a good rapport with staff members (context), which enabled her to work with them, using their expertise to identify and manage barriers to implementation effectively (mechanism). This allowed SIL1 to effectively implement the ERP in a different, but similarly effective way to the other two SILs (outcome).

Being Part of a Team

…working with others

SIL1 went on to reflect back on her own input and achievements across the research process, referring to herself as a "facilitator" and "instigator" of change who, rather than taking personal responsibility to make every change happen, has identified appropriate and motivated members of staff to delegate tasks to. She had discussed this in her second interview, but was now realising the full benefits of this approach. Not only did this reduce the burden on her, but this also promotes long-term sustainability of those elements of the pathway. By giving staff a sense of ownership of the pathway, she argues that she has been more diplomatic throughout the process – as an outsider to the ward staff, she has had to be tactful in how she makes demands of those staff –

"…what I was very conscious of in the beginning, is coming in and stepping on people's toes. Because if I came in and said "do this, do this, do this, we need to do this", well you're gonna get people's backs up straight away, so I was more of like "well, actually, I wanna work with you, I want us to work together, and you're in a better position with my support to make this happen"…."

At the start of the research process, SIL1 had expressed anxiety about her lack of ward background, and the challenges she faced in getting to know ward staff well enough in order to have this sort of professional and productive relationship with. She has demonstrated that she was not only able to

forge collaborative working relationships with a range of staff groups previously unknown to her (context), but that she can use this complex network of relationships to their fullest advantage, to create an open dialogue for group problem solving (mechanism). On a personal level, it relieved some of the burden of responsibility from SIL1, and on a ward level, it formed the groundwork for realistic, long-term sustainability for PERFECT-ER.

…valuing different perspectives

I had previously seen SIL1's self-consciousness about her position as being a potential stumbling block to her ability to make meaningful progress, that it might prevent her from taking positive risks and implementing the pathway to its fullest potential, whereas in reality, it has made her sensitive to the attitudes of ward staff who may have initially questioned her authority in her role. Even without a background working on a hospital ward, SIL1 demonstrated sensitivity towards the challenges faced by ward staff. Although her background was different, she was able to relate to staff as she understood the general pressures that clinical staff faced on a day to day basis –

> *"…if they don't want to take it on, or they don't have time, and I understand that coming from my clinical background, having been in the same position as them, I understand…"*

SIL1 also highlighted the important insights that the role of SIL gave to the research team, and the ongoing development of the pathway. As in her previous interviews, she explained that at times she found the research team to be unrealistic in their expectations for what was and wasn't achievable in practice. By engaging in a dialogue between SILs and the research team, SIL1 felt able to have meaningful input into the development of the ERP –

> *"…some of the suggestions we put out, [university researcher] actually said "well that was one of the things but we didn't think it was practical". Well we're saying to you, that it is practical. That's something that we would want."*

Although SIL1 found this dialogue frustrating at times, she persevered in order to achieve her aims, and to help develop a pathway that she was proud to represent.

…managing disagreements

As well as seeing herself as a "project manager" and "facilitator", SIL1 spoke about her role as being a "mediator". She explained that there were times when different members of staff disagreed about how best to handle challenges, and SIL1 used her position to encourage productive discussion and collaborative working –

"…in meeting and things and I've been to like, you've got differing opinions and they get at each other and you're like well actually just listen to the other person, listen to that person, and then we'll talk about it, instead of just yelling at each other…"

By mediating the discussion process, SIL1 was able to ensure that all staff members present at the meeting were able to voice their opinions, and this enabled productive discussions resulting in mutually agreeable decisions. Different staff groups have different preferred ways of working and different priorities, and by mediating their discussions around implementing the pathway, SIL1 encouraged effective multidisciplinary working which benefited everyone.

SIL1 recognised that this was a personal skill that she had to develop over the research process, and was proud of how far she had come –

"Communication skills….in theatre, being a theatre nurse you do have a level of communication, but it's very direct, to the point…where in this job, I've had to learn to pull back a bit…that's a good communication skill…I'm a good mediator. Which I've never had to be before."

This is also reflected in her field notes and reflective feedback, where she spoke positively about how her relationships with members of staff had developed over the process of implementation.

Sense of identity

…as a victim

Despite her successes and growth throughout the research process, including this collaborative team working, SIL1 again highlighted the fact that she was "the odd one out" in PERFECTED WP2. She didn't share a ward identity with the ward staff she was working with (although they did accept her presence on the ward and were motivated to work with her), and she felt "different" from the other two SILs because of her background in theatre. Her lack of ward-based experience meant that she faced additional challenges that the other two SILs did not experience, and this left SIL1 feeling like a victim of her own situation. She highlighted a pre-existing relationship between ward staff and theatre staff, and her initial concerns about how this would affect her efforts in relating to the staff on the ward -

"…that's why I had anxiety in the beginning because there was that barrier, because I am a theatre nurse….how are they gonna accept me, how are they gonna embrace me, because I am a theatre nurse. And they don't particularly like theatre very much…"

Although she was able to see the advantages of her unique position, she still returned to her previous narrative of feeling distant and separate from others, particularly from the other two SILs. Reflecting back on her second interview, I felt a bit saddened to hear that she still had these feelings of isolation -

"I do feel very left out…I do feel very different to the other [SILs]"

Even though she found the peer support from the other two SILs useful, back on her own ward, as the sole person responsible for coordinating the ERP implementation, she felt isolated, as none of her ward colleagues could fully appreciate the challenges she faced in her role –

"…no one will ever understand the job that you do as a SIL, nobody will."

…accepting limitations

However, I did get the impression that she had come to terms with her isolated position; her attitude had matured with time, and she was coping with her situation by seeking support from others. She was comfortable in her role and recognised that while no one else could fully understand the stressors she experienced, they could still relate and offer meaningful support –

"… you can talk to people who have probably been in similar situations, maybe for different reasons, but there's similar kind of scenario and you just have to get perspective on it. You will find your motivation again."

This was very different from the SIL1 I had met at the start of the research process, who was anxious, and at one point, so unmotivated that she was close to leaving the project. She had met a variety of challenges throughout WP2, but despite her struggles, had emerged more resilient and confident than before. She accepted now that not only were certain things beyond her control, but this wasn't a personal failing. She was able to put aside insoluble challenges, and pursue more meaningful changes -

"…pick your battles. If you know you're just not gonna win, don't bother. If it really is an organisational level, don't invest all your time in something … don't invest your time in something that's really not going to go very far…"

…as a team member

Despite expressing some ongoing feelings of difference and isolation, it was clear to me that by this stage in the research process, SIL1 had been accepted as a member of the ward team. She explained that even though it was daunting to start, as she didn't really know any of the staff she was working with, the research process had highlighted their shared concerns and motivations, and provided a

common ground for them to connect on. Given her different background in theatre, she was also able to lend an alternate perspective to certain issues, and change ward staff perceptions of their colleagues in theatre –

> *"…I didn't start off that way, and they'd only ever seen me as a theatre nurse. And I think it's opened up. I think they've been opened up to the fact that all, not all theatre nurses are stuck up, got their own agenda, they hate us. Yeah, ward staff and theatre staff don't get on…"*

I found this revelation particularly interesting, as this was not a challenge the other two SILs would have faced. But even with this additional barrier to change, SIL1 demonstrated that not only was she able to implement change effectively, she also challenged some of the pre-existing perceptions of staff, potentially paving the way for more open-minded, collaborative working between teams. I genuinely hoped that SIL1's successes during this project would enable broader changes in staff attitudes towards their colleagues, overcoming interdisciplinary prejudices for the benefit of patients and staff alike –

> *"…where I'm saying I'm the mediator, in that I'm in the middle, and it was easier to break down those barriers, because of my background…"*

What she originally saw as her greatest challenge to affecting change, SIL1 now saw as a significant advantage. Her unique perspective from her background in theatre allowed her to challenge the preconceptions of ward staff, an approach that would be unavailable to the other two SILs. In fact, she highlights that a lack of understanding of theatre staff is a disadvantage, and suggests that future SILs without this experience should be encouraged to gain some experience to support their development in the role –

> *"…it's the culture, it's the environment, unless you've worked in that, you don't understand that….so even if SILs just spend a day in theatre with the trauma team, shadowing the trauma coordinator…just trying to get into those other people's roles and understanding their daily pressures…"*

This was particularly revealing, as it echoed similar concerns from the other two SILs, as they stated similar concerns regarding a lack of ward based experience (which I will discuss in full in their narratives). Clearly, a SIL cannot have extensive previous experience in all areas relevant to their role, but regardless of a SIL's background, it is clear that there are still opportunities to support their development within the role.

Finally, SIL1 highlighted the value of team working. At the start of the implementation process, she had expressed feeling under huge pressure to ensure the success of the project, and felt that this responsibility was solely hers –

"…when I first came in, it was very much "this is on your head…the success of this rides on you…"…."

In this interview, she explained to me that while she had been driving the process, the success was down to the team working together, not her alone –

"It's not all about me, it's about us. Cos I can't do any of what I've done over the last year without all of those people behind me. Wouldn't have been possible. It's not a one person show."

SIL1, as implementation change agent, acted as a central contact and coordinator (mechanism), facilitating multidisciplinary collaborative problem solving, and enabling successful ERP implementation (outcome).

Reflections on SIL1's third interview

At this 11-month mark in the project, SIL1 had clearly matured into her role and made it her own. Reflecting back on the process, she was able to recognise that there were limitations to her influence, and she had perhaps needlessly worried about issues that were not her responsibility. Throughout all of her interviews, SIL1 has described the SIL role as a lonely job, that no one else can truly understand the experience. While this belief persists at the end of project, the way she conceptualises this feeling of isolation has changed: she has taken ownership of her position, grown in confidence, and become more self-sufficient. She was able to identify when to seek counsel and support from others, and had forged a broad range of professional relationships, allowing her to solicit appropriate advice when required.

SIL1 had by this stage also developed a "good enough" attitude: she recognised that certain elements of the pathway implementation process were outside her control, and while these used to be a source of anxiety for her, her outlook has matured. During this interview, she did not come across as distressed by things she could not fully implement, but instead reflected on the positive changes she made throughout the implementation process.

I was particularly moved by her explicit recognition and appreciation for the staff she had worked with throughout the research process. I reflected back to her first interview, when she seemed so anxious to prove her ability, and took personal responsibility for the success or failure of the project. As the project was coming to a close, SIL1 explained to me that the success of the project was not

solely her responsibility, and none of the changes would have been possible without the motivation and capability of the members of staff she had worked with, and grown to call her "team". Despite her early reservations, feeling she was unable to relate to staff, or that they would not accept her presence on the ward as she was not "one of them", SIL1 demonstrated that regardless of her background and previous experience, she was able to work collaboratively and productively with a broad range of staff groups, in order to achieve shared aims.

4.7.4 Implementing PERFECT-ER in Hospital 2

4.7.4.1 Background

SIL2 was based at a major trauma centre in an urban location, with three trauma and orthopaedic wards and a busy A&E department. She has worked as a ward nurse in trauma and orthopaedics for the past nine years, first as a Band 5 staff nurse and now as a Band 6 deputy ward sister. Her PI has been involved in the PERFECTED research project since the early phases. For the PERFECTED project, SIL2 had been asked by her PI to implement the ERP across all three trauma and orthopaedic wards at their hospital. She has worked on one of these wards for several years and is familiar with the staff there. While being employed 22.5 hours per week as a SIL for PERFECTED, she spent her remaining working week continuing to work as a deputy ward sister on her ward. Before joining PERFECTED, SIL2 had minimal previous research experience.

> *I first met SIL2 at the informal PERFECTED team dinner in Norwich. She struck me as someone who was confident in her abilities, matter-of-fact and knowledgeable. She acknowledged the limitations of her experience (e.g. she had little previous experience conducting research and did not know what to expect from being a SIL for PERFECTED) but did not seem anxious in the same way that SIL1 did. I was even slightly intimidated by SIL2, and her "ownership of the space", with confidence and forthright speech, made it easy for me to understand why she would command authority and be an effective ward sister. At this early stage, I imagined she would step naturally into her role as SIL, as she clearly had good experience of working with a broad range of staff in a ward environment. I wondered what challenges she would encounter during the research process.*

A recurring theme for SIL2 was "the SIL role", and she expressed strong views about the purpose of the role, and what skills were vital to be an effective SIL. Related to this, SIL2 spoke emphatically about the importance of "working with others" effectively, and attributed much of her success in the role to her existing relationships with ward staff. She identified strongly as a member of the ward staff, and had little previous research experience, meaning she found "the research process" challenging and frustrating. A summary of SIL2's themes and sub-themes is given in Table 5 below.

Superordinate themes	Sub-themes	Interview
The SIL role	...perception of the role	1, 2
	…important skills	1, 2, 3
	…personal development	1, 3
	…purpose and focus	2, 3
Working with others	…existing relationships	1, 2
	…being part of a team	1, 2, 3
	…peer support	1
	…motivation	3
The research process	…expectations and frustrations	1, 2, 3
	…managing challenges	1, 2, 3
	…the importance of context	1, 2, 3
	…sustaining change	2, 3

Table 6: Themes from Hospital 2's dataset

Prior to my first round of interviews with the SILs (in month 5 of their time in role), the SILs had completed two checklist and action-planning cycles. For the first of these, the PERFECTED researcher describes in their field notes that trying to get of SIL2 to arrange a pre-meeting discussion as "difficult". Mirroring this, SIL2 explains that ensuring staff attended the action-planning meetings was challenging, not because they lacked motivation, but because of the "difficulty of them getting off the ward". It was challenging to arrange these meetings, vital to the implementation process, because ward staff were simply too busy with their ward duties.

Like me, the PERFECTED researcher described SIL2 as "confident in what she was doing", but also that she appeared to have "her own agenda", i.e. that she was using her time in role to promote the changes that she felt were important, not necessarily what was specified within PERFECT-ER (although there was some overlap). This is further demonstrated in the PERFECTED researcher's perception of the action-planning meetings: that these were more of a presentation of what SIL2 planned to achieve, rather than an open dialogue with staff to explore how they could collaboratively achieve the aims as set out in PERFECT-ER. However, the PERFECTED researcher did speculate that, as the meetings appeared informal and friendly, perhaps ward staff would approach SIL2 informally at another time to give feedback or discuss ideas.

For the second action-planning meeting (which I also attended), the PERFECTED researcher again describes SIL2 as focusing only on what she felt was important, ignoring items which she felt were unachievable. The PERFECTED researcher felt that there was "not a problem solving approach"

apparent in these meetings, and many of the changes that ward staff were pleased to see occurring, were not actually linked to PERFECT-ER. The PERFECTED researcher also explored the fact that SIL2 had worked in her hospital for some time before taking on the SIL role, and as a result see her as being "part of that culture and the associated barriers": the fact that she was so familiar and embedded in the ward prior to taking on the role of a change agent was creating barriers to change, rather than facilitating implementation of the pathway.

4.7.4.2 SIL2 Interview 1

My first interview with SIL2 was conducted in a quiet room at SIL3's hospital site. She came across as calm, confident, and spoke in a concise and matter-of-fact way. After giving a brief but detailed description of her hospital site, SIL2 explained to me that she came into the role via her PI, who was already involved with PERFECTED –

> *"...one of the orthogeriatrician consultants asked if I would help write the job description for the role…we had the observations done on our wards, [the consultant] had initially become involved with PERFECTED already…so I was already aware of PERFECTED and out of that was going to come the service improvement job…"*

I found it particularly interesting that SIL2 was so intimately involved in the creation of the SIL role at her site. Clearly, she had an understanding of the pathway and the aims of PERFECTED before she commenced in the role, and I wondered to what extent this might affect her experiences of the process. I speculated that this existing knowledge of the pathway might give her greater insight into its design and rationale (context) which might aid her ability to act as an effective coordinator for the implementation process (mechanism).

The SIL role

…perception of the role

She had initially been hesitant to go for the role as SIL as working in research wasn't her preference, but the opportunity to improve care at her hospital was attractive –

> *"I don't know if I was even that keen to be honest…[the consultant] had said "you should do it"…I don't want to be doing audits and I don't want to be doing research full time…So [the consultant] sold it to me like you could improve the care, and also it gives you that time so I can be getting on with the other two wards."*

Although she stated that she would rather be working in a frontline role supporting patients, she rationalised that a finite, twelve-month role in a care improvement project would be of significant benefit both to her hospital and to her own professional development. She also explained that unlike the other two SILs, she had been tasked by her site PI to implement the ERP in three wards at her hospital. I found this revelation curious, as I was not sure what impact this would have on her role within the PERFECTED research project. I wondered how she would manage her time implementing the ERP across all the wards, but she appeared confident that this wouldn't be an issue. She highlighted her role as SIL within the project as a valuable opportunity to work standardising care across the three wards –

"…the other two wards, cos I don't work on there…now it would, it gave me the time, [the consultant] sold it that it was gonna give me the time to get on the other two wards…"

While not strictly part of the WP2 aims, this insight demonstrated to me that SIL2 had a strong focus on consistently improving care throughout her hospital. With her extensive ward experience, she already had an understanding of the existing practices at her ward (context), and came to the research project of ideas of what needed improvement.

…important skills

SIL2 was well aware of the personal and professional skills that she was able to bring to the role, identifying her previous ward experience as a key facilitating factor enabling her to execute her role effectively. SIL2 made it clear that she viewed ward-based experience as a vital skill needed by SILs, as it gives them insight into how a ward works, and the specific challenges faced by staff. She highlighted that both she and SIL3 share a background of working on wards, but SIL1 doesn't share in this experience. SIL2 is aware of how this makes her the odd one out -

"[SIL1] doesn't feel like she's got anything to offer on the wards at all, because she's not come from a ward background…"

SIL2 holds strong views about the impact SIL1's background has had on her ability to make meaningful changes on the ward, arguing that she is perhaps too "research focussed", and stating that the primary concern should be "the patient experience". As SIL1 has not worked on a ward, SIL2 argued that she did not have the necessary insight into the experiences of ward staff (context) to inform her decision making (mechanism not triggered). That said, SIL2 does have sympathy for SIL1's position, and while she does think SIL1 may be successful in her role, she faces challenges that SIL2 has not, and this is a potential lesson for the next phase of the PERFECTED research programme –

"I think it's difficult and I think she's had a harder journey, and that's not her fault, but I think when recruiting for the next ones, I think if you're gonna recruit..."

I took this to imply that change agents who lack ward-based experience may be less effective than at fulfilling their role, and would require some additional training or support in order to be able to communicate effectively with staff (i.e. influence context in order to trigger generative mechanism). Although SIL2 does not explicitly state that SILs should be recruited from ward staff, she implies this by going on to speak at length about the importance of ward experience and insight. Not only does ward experience give a SIL insight into the specific challenges faced by staff on a day to day basis, but it also creates a degree of relatedness and mutual respect with ward staff –

"I can't see how I would have reacted to somebody coming in to my areas, doing the job that I'm doing now, I think I would have reacted terribly if someone from outside, and you just think, "you've got no idea…what it's like being on these wards"."

Without an understanding of the challenges faced by ward staff, SIL2 doubts SIL1's ability to relate to the staff properly. Despite this criticism, SIL2 values SIL1's experience and knowledge of the research process. SIL2 recognises a lack of understanding of research to be a personal weakness, and an area where she needed to develop in order to succeed in her current role –

"…not one person can know everything…[SIL1]'s more as we know on it with regards to research and ethics…I think it's important that you have a mixture…"

The valuable peer support shared between the three SILs is discussed in more detail later in this section. It is worth noting however that this research knowledge was specific to the circumstances of PERFECTED WP2 (an action research project), and would not necessarily be an advantage in a traditional ERP implementation effort.

…personal development

While SIL2 held strong views about what skills a SIL should possess, and was confident in her existing ability, she did express some uncertainty and trepidation about carrying out certain aspects of the role, as they were unfamiliar to her, for example running the action-planning meetings –

"…the first one was initially daunting because I've never done anything like that…"

I admired this humility in SIL2. From our early informal discussions, I had assumed that she was perhaps over-confident and that this would be a challenge in itself as it might prevent her from constructive self-reflection. However, she readily acknowledged gaps in her experience and understanding, and worked proactively with others to address these. In particular, she emphasised the importance of working collaboratively with others in order to achieve a shared aim –

"…you need everybody, you need a whole variety of people to help them change things, you can't do something on your own, it's massive, it's key."

Throughout the research process, SIL2 had to build good working relationships with a broad range of staff, both on the ward and in higher management, in order to achieve the aims of the project. Although some of these relationships were new, SIL2 was already familiar with many of the staff on the ward from her previous and ongoing role as a ward sister.

Working With Others

…existing relationships

Being familiar with the ward staff is a clear advantage for SIL2, as it meant she knew the appropriate people to talk to, and had no reservations in approaching them. It also meant that the staff working with her trusted and respected her, making them more open to her requested changes, and she was acutely aware of this –

"I think I'm spoilt because I think they're motivated because I asked them to come…"

Despite her positive, existing relationships with staff, SIL2's field notes in the early stages of the process revealed that this did not always guarantee open dialogue or adherence. She describes that she discovered "some colleagues holding back on information, when it could show their service in a negative light". Rather than seeing this as an opportunity to emphasise the importance of accurate reporting in the interests of ongoing improvement, SIL2 reports that she spoke only about "being open and honest". I am unsure how this was intended or how it was received by staff.

Although healthcare staff are generally motivated to provide the best possible care for their patients, implementing significant changes in practice can be challenging as it often requires more conscious effort from staff in the short-term, until these practices become embedded. I got the impression that the staff at SIL2's hospital were more motivated to engage with and overcome these challenges based on their existing relationships with her, and she sees this engagement as a crucial factor in the ERP's implementation –

"It's massive. Huge. You can't achieve anything in nursing, or as a deputy sister, you can't achieve anything if you haven't got the backing of your team, because no one person can do it all."

This humble statement from SIL2 demonstrated to me how much she valued a strong and positive multidisciplinary team dynamic, and it was clear how much she valued the good relationships she had with staff on her ward.

…peer support

Although SIL2 initially gave the impression of being completely self-sufficient, it was clear to me that she valued her relationship with the other two SILs. While her discussing the ERP with them introduced an element of uncertainty to her (as mentioned above), these discussions were also an opportunity to reassure her that she wasn't alone in her difficulties, and served as method of problem solving. At the beginning of the research process, they hadn't been in regular contact, but after an initial meeting, they mutually agreed that regular contact was both useful and important -

"…we could talk about how difficult it is, how challenging we found… you know, working in something like research which myself and [SIL3] never have, whereas [SIL1]'s coming from a research background, or is developing into research nurse, that's not anywhere I want to go, nor [SIL3], so you know it's- it's worked quite well really, because we're [SIL's 2+3] from the wards, whereas [SIL1]'s not from the wards, so she's looking at it from a different view…"

SIL2 was able to identify the gaps in her own understanding, and how she can benefit from the expertise of others. She also recognises that how she understands the ERP and her approach to implementing it differs from that of her peers. By sharing their experiences, the SILs buoy each other's confidence and they feel more prepared when feeding back to the PERFECTED research team –

"…it's nice to have the chats before the PERFECTED things, so that we all know what the other person's thinking…you almost feel more professional and you can, I feel that what you can say has more value because you know about it."

Although sharing their experiences can help them to see their situation from another perspective ("not one person can know everything on care, so you can take bits from other people"), SIL2 also recognises that it can serve to further isolate people, highlighting again that SIL1, with her lack of ward experience, was often the "odd one out" in these discussions.

…being part of a team

Throughout the research process, the SILs had to work collaboratively with a broad range of different staff and teams, and while managing these relationships did present challenges, it was also a vital part of the implementation process. At this early stage, SIL2 strongly identified as a member of the ward staff, which is understandable given her previous (and ongoing) role, working as a member of ward staff. Throughout the interview, SIL2 referred to "my ward" and herself and the ward staff as a collective "us". This was also apparent in the observations taking by PERFECTED researchers, who described SIL2 as being "part of [the ward] culture". In contrast, she expressed a disconnect between the hospital staff and the PERFECTED research team, stating similar misgivings that SIL1 had expressed in her later interviews, that the research "ideal" was removed from the clinical "reality". Unlike SIL1, who at the start of the implementation process focused on the ERP elements that she felt were impossible to implement, SIL2 spoke about the ERP's short-comings, and how she felt the ERP didn't address patients' needs sufficiently -

"…if you just delivered what PERFECTED wanted you to deliver I don't think you'd improve that much."

In this first interview, rather than working collaboratively with the PERFECTED research team, I got the impression that SIL2 saw the research team as a challenge to be overcome, or a team to be appeased, while she continued with what she saw as more important priorities. SIL2 spoke a more than once on the subject of manipulating the pathway, explaining to me that certain elements of the checklist were ambiguous were open to interpretation. Although this came as no surprise to me, as SIL1 had described the same issue in her interviews, I was surprised by SIL2's approach towards this ambiguity and her attitude towards the research team generally, stating that it was a process of:

"…ticking the boxes that PERFECTED want you to tick, presenting them the information that they want you to present, and then using the time to then go and improve care and see things that you want to improve in your Trust, that's how I've used it"

I was surprised at SIL2's candour, essentially telling me that she had "gone through the motions" with the ERP checklist, seeing this process as a necessary hurdle she had to vault before she could get on with the work she really wanted to do. This had also been apparent to the PERFECTED researchers, in the field notes and observations of SIL2's action-planning meetings: SIL2 had very clear ideas of what she felt the ward needed to be doing in order to improve care, and those ideas did not always agree with PERFECT-ER. Even at this early stage in the process, SIL2 had what I could

only described as an "ulterior motive" in her position, and a strategic plan for dealing with her responsibilities as a SIL before moving on to what she felt was of greater importance.

I found myself feeling a combination of admiration for her creative approach to achieving her own goals within the confines of the project, but also a deep feeling of disappointment for the potential effects this would have on the overall research process. It was clear to me now how important some previous research experience was for the role of SIL, in terms of understanding the importance of collecting accurate audit information for the purposes of service improvement. By having a "ticking the boxes" attitude, SIL2 opens the door to almost deliberately misrepresenting the data from her hospital, giving an inaccurate picture of implementation success at this site, and having potential long-term impacts on the findings from the project. In their field notes, the PERFECTED researchers report that SIL2 did not typically adopt a problem-solving approach to her action-planning meetings, instead independently deciding, ahead of time, to reject certain pathway items as "not achievable". This indicated to me that SIL2 had pre-existing aims for what she wanted to achieve at her hospital, and these may have created a conflict of interest in how she fulfilled her role as a change agent. To some extent, I believe this inhibited her full understand of the ERP and its rationale (context), and this in turn limited the ability to which she could act as a central contact regarding the ERP (mechanism not fully triggered). This will have had implications for the ERP implementation process (outcome).

Despite her criticisms of the research process, SIL2 concluded by reflecting that "overall everyone's lovely at the [research university] I just I'm disappointed that the checklist wasn't more…more."

The Research Process

…expectations and frustrations

SIL2 spoke optimistically about the early stages of the project, and I had the impression that she had high hopes for the impact it would have. However, she experienced some frustrations with the research process early on –

> *"I thought we'd have an ERP when we started the project. It was quite frustrating to have a number of weeks without an ERP and having left my role as a Band 6 to do it and to then, people be asking, you know colleagues and boss- you know consultants… "what exactly are you doing?", well I don't actually know, because it's not ready."*

As a ward sister, SIL2 had been used to a fast-paced way of working, and in these early stages of the project, as the pathway was still under development, she became frustrated with the slower pace of

working. She was being asked questions by colleagues that she could not yet answer, and she felt disappointed and underwhelmed –

"I was expecting more from it than what we've got."

SIL2 saw the ERP to have two main elements: things they were already doing at her hospital, or changes that were simply impossible ("environmental things"). She generously speculated that this may potentially mean that her hospital was "already doing things sort of alright", but it became clear throughout the interview that she thought that the pathway "doesn't go far enough". SIL2 had expected the pathway to have more dementia related elements, and more specific guidelines for changing practice. When she received the pathway checklist and it didn't meet with her expectations, she was disappointed, and spoke critically about the project and design process.

…managing challenges

When I first asked SIL2 if there were any challenges or barriers to implementing the pathway, she initially gave a short answer that, aside from structural issues (e.g. the layout of the wards), nothing had been a challenge for her. I had expected this sort of answer from SIL2, who had consistently presented herself as confident, sure and in control. However, when I pushed the subject further, she reflected that discussions with the other SILs had revealed that elements of the ERP weren't as clear-cut as she had first thought –

"…having spoken to the [other SILs]…it's how you interpret the question as well, as to whether it's a yes or no. So, you know, there's a lot of, you can interpret the questions differently to what you do in your own site to manipulate the answer to yes or no. Almost…"

This introduction of ambiguity introduced a level of uncertainty to SIL2, who until this point had been very certain about her actions. Further challenges were introduced once she began opening up the discussion to staff on the ward –

"…there's points in the checklist that people, frontline, can't see any reason for. And there's no evidence around it, it's just a consensus of opinion. So we've got no evidence to say, other than this is an opinion of experts….it is challenging to implement them when they're not evidence based, when in nursing all we talk about…is evidence based care."

Here, SIL2's background as a ward nurse again became a barrier, as she herself shared the frontline staff's view that care should be evidence-based, and as such she held scepticism about elements on

the ERP (context). She struggled to argue the case for the pathway, as she ultimately agreed with the ward staff that this aspect of the research process was flawed (mechanism). This puzzled me, as my understanding was that PERFECT-ER was evidence-based, designed through a thorough process of expert consultation and consultation to academic literature and clinical guidelines. I wondered to what extent SIL2 had investigated the evidence base for the pathway, and remained sceptical about her rationale surrounding her decisions. PERFECTED generated data from this time suggested that the SILs used their personal and professional judgement regarding elements on the checklist, and this may imply that they had not fully understood PERFECT-ER and its evidence base (context).

Once SIL2 had begun to explore the topic of barriers, she was able to identify further issues, such as potential time burdens (involving families in MDT meetings "normally like half an hour to 45 minutes would probably go on for 2 hours") and rotation of staff ("the band 5 staff move around the same as the junior doctors. So there's almost no point…"). She also encountered problems with specific staff groups lacking motivation or resisting change –

> *"…doctors refused to assess patients' dementia on admission so then it fell back on the nurses to do, well hang on a minute, why are nurses trying to diagnose dementia on admission…simply because the doctors refuse to do it."*

How SIL2 dealt with this issue is not clear. SIL2's people management skills to this point seemed to me to be founded on the basis of exerting her existing authority. With staff that she has no authority over (in her role as a ward sister), their refusal to enact changes simply meant those responsibilities fell to others to pick up.

…the importance of context

SIL2 had a good understanding of the impact that local context had on her ability to implement the ERP. Certain changes she accepted early on were simply not possible in her hospital, and these did not seem to bother her, or caused her only passing frustration –

> *"…not anything unachievable, apart from like rooms or you know layouts or environmental things…"*

> *"…there's no change, you know, "do you offer a 7 day service?" no, that's not changes, they've got no money for it, so, really to come to be told you've achieved it zero times again is a bit of a waste of time…"*

A good awareness of her local context was helped by her extensive experience working within the hospital, and this helped streamline her efforts to implement meaningful changes. She was also

aware of changes which would be challenging to implement because of staff attitudes, and rather than waste time fighting against staff resistance to change, this insight allowed her to focus her energy on developing creative solutions to problems –

> *"…if you take the point of the relative coming to the MDT, the people that are in the MDT categorically don't want that…we've got a ward doctor 8-5, we've got nurses who, ortho nurses, the rehab nurses are there from 8-3 Monday to Friday, so there are times when people can speak to these people, they don't necessarily have to come to that MDT."*

Although this "work around" doesn't necessarily mean SIL2 has achieved the aim as stated on the ERP checklist, she is focused on ensuring that her patients and family/carers needs are met, further highlighting that SIL2's focus was on the patient experience, rather than on achieving the aims exactly as set out by the PERFECTED ERP.

Reflections on SIL2's first interview

I went into this interview thinking of SIL2 as a very confident and decisive person (she describes herself as being "very black and white"). While I still hold this view, this first interview demonstrated to me that she also had a number of uncertainties and concerns, even if she was at first hesitant to express them to me. I became concerned that I had been overawed by SIL2's confidence and self-assured attitude. Now that she had disclosed to me that she to some extent subverted the research process in order to further her own aims for her wards, I began to wonder if she had overplayed successes in other ways. It was clear from this interview that SIL2 came to the project with her own personal aims for what she wanted to achieve during the twelve-month research period, and these weren't always in line with what had been requested of her by the PERFECTED research team. Here, I saw a distinct disadvantage to her lack of research experience, as I felt she had not fully understood the purpose of the WP2 process.

I thought back to an early teleconference I had observed (in October 2015), in which the SILs reported their preliminary ward observations back to the PERFECTED research team. During this conversation, SIL2 stated that she had observed some of her ward colleagues failing to complete some tasks that she had trained them to do as part of her role as deputy ward sister. She explained that she would address these failings when she was back on the ward as a sister later that week. I raised this with the PERFECTED research team as a confidentiality concern, as there should have been a strict delineation between the role of SIL and the role of ward sister: staff on the ward had consented to be involved in the PERFECTED WP2 study on the understanding that they would be observed for audit purposes, and not for the purposes of performance evaluation. Data collected as

part of the SILs' ward observations could not then be used to directly intervene with what SIL2 perceived to be ward staffs' failings, without breaking the terms of the consent. Although the PERFECTED research team were able to address this at the time during the conference call, this highlighted a lack of experience or understanding of the research process. This is also demonstrated through SIL2's pursuit of "her own agenda", promoting changes that were not in PERFECT-ER, and rejecting PERFECT-ER items out of hand as "unachievable". Although there were clear advantages to SIL2's previous ward experience at her hospital (knowledge of local context, existing rapport with staff), I began to consider how this level of embeddedness could also act as a conflict of interest, inhibiting her ability to engage fully with the ERP implementation process. This incident could have perhaps served as an opportunity to offer further guidance on conducting research as a healthcare professional, and ensure that SIL2's motivations were in line with the expectations of the PERFECTED research team.

4.7.4.3 SIL2 Interview 2

Prior to my second round of interviews, the SILs conducted their third round of audits and action-planning meetings. Again, the PERFECTED researcher stated in their notes that this did not seem like an action-planning meeting, as there was "no clear plan or discussion", and input from the attending staff was minimal. However, unlike the notes from the PERFECTED researchers in the previous meetings, this researcher speculated that perhaps most of the action-planning happened informally on a day-to-day basis, and that SIL2 was clearly achieving changes, so perhaps a large, formal meeting was unnecessary in her circumstances. While I found this perspective interesting, I viewed it with some scepticism: both through the other researcher's notes from previous meetings, and SIL2's explicit admission to me in her first interview, SIL2 had her own aims which she wanted to achieve on the ward, and did not seem to invite discussion on this. The ward staff liked and respected her, and although they did not always agree with her (the few contributions they seemed to make within the meetings tended to be highlighting barriers to change), for the most part supported what she suggested. This is demonstrated through the PERFECTED researcher's observation of the third action-planning meeting, describing that "the SIL dominated the meeting", and the staff as a whole as "target focused". Although having a good rapport with staff (context) may be beneficial in many settings, here SIL2's pre-existing authority from her previous role seemed to inhibit the triggering of generative mechanisms, i.e. open discussion about the ERP process. Although staff were still motivated to implement the ERP, the way in which they did this was mainly dictated by SIL2.

The second round of interviews was conducted in a quiet room at the UEA, as part of a scheduled SIL visit. SIL2 began the interview with a concise and professional summary of her progress since our

last meeting, outlining the main changes to the pathway that the SILs had influenced via their feedback.

The Research Process

…expectations and frustrations

When I explored this further, SIL2 explained that she and the other two SILs had been disappointed by the content of the pathway, as it had very few dementia-specific elements –

> *"… I found the checklist for the first two cycles just generic to hip fractures…there was only probably the patient identifier in the first two cycles that had anything other than the pain assessment that had anything specifically related to dementia…"*

SIL2 revisited the subject of how working as a SIL had initially felt isolating, but the decision for the SILs to meet together and share their experiences had helped to consolidate their thoughts and support one another –

> *"…we sat down and we went through and we were like there's just nothing enough on his, dementia specific, so we wrote down the things that we thought were important."*

Whether the SILs would have had the confidence to feedback these feelings individually is impossible to know, but as a group, they gave a clear and unified account of their shared concerns. This approach had the desired effect, as SIL2 states "finally, it looks like something that we thought it was going to look like at the beginning". She is relieved that they have been heard, and that their feedback and involvement is having a meaningful impact. This was reflected in PERFECTED researcher field notes, which describe the SILs as supporting and empowering each other.

SIL2 also explained that there were certain elements on the checklist she found impossible to implement. These were primarily related to structural and resourcing issues, over which SIL2 had no influence. The fact that these were on the ERP checklist, despite her insistence that they were unrealistic and unlikely to ever change, was a source of frustration for her –

> *"I don't see why that's on the checklist to be honest."*

However, unlike SIL1, who initially described these insoluble problems as being a source of anxiety for her, SIL2 saw these issues as more a nuisance than a real problem. This is reflected in the PERFECTED generated field notes, where the researcher in attendance at SIL2's third action-planning

meeting notes SIL2 was “less dramatic, less anxious and outwardly less frustrated by the ambiguity” than SIL1 had been.

SIL2 framed the issues as a failure on the part of the research team, rather than a personal failure as she had been unable to implement the desired changes. This is also described in PERFECTED generated data, noting the ongoing development of a “them and us” scenario. This again demonstrated to me SIL2’s strong alignment with the hospital team, and a disconnect with the research team: SIL2 saw the ERP as being fundamentally flawed, as it didn’t address the challenges she wanted and expected it to address. At this stage in the project, she took this quite personally, as she took ownership of the ERP implementation process, and felt the quality of the pathway itself reflected on her (and the other two SILs) professionally -

> *“…how are we going to stand up and hands on our hearts and say yeah we think this is alright? Because actually none of us thought it was good enough for our patients…It didn’t represent what we needed it to represent…”*

However, in this stage in the research process, it was clear that the SILs were beginning to realise the impact that they could have on developing the ERP itself, and SIL2 was particularly focused on bringing a ward perspective to the development of the pathway. She explained that there were longer-term implications to the process of SIL feedback, change and development, and discussed the next phase of the research project –

> *“…we realised if we’re going to be mentoring this next group of SILs, how are we going to stand up and hands on our hearts and say yeah we think this is alright? Because actually none of us thought it was good enough for our patients.”*

…managing challenges

It was clear to me that SIL2 considered this be important not only for the improvement of patient care, but also as a matter of professional reputation: she saw it an important part of her role to see that these changes were made to the pathway, even if it was the result of a challenging and time-consuming process –

> *“…it felt a huge relief that we managed to affect that change for the next group of people...it’s more something that you can be proud of…we worked hard on that…”*

This signified to me an important shift in SIL2’s attitude towards the WP2 research process: in her first interview, she had seen the completion as a “box ticking exercise” that was a necessary hurdle

in her aim to progress her own personal aims for her wards, but in this interview, she was more concerned with integrating those aims into the ERP itself. She was now more fully invested in the PERFECTED research process, and saw her role as an opportunity to have a meaningful impact on the pathway –

> *"…that needed to be inserted into the checklist…we put that to the [research university] and then…when the checklist came out for cycle 3, it had those things on there….we were like, finally, it looks like something that we thought it was going to look like at the beginning…"*

By working collaboratively with the other two SILs, who shared her concerns, SIL2 was able to be a part of the process of developing the pathway into what she saw as a more impactful and relevant initiative.

SIL2 also worked collaboratively with ward staff to improve the process of change. She noticed that certain elements on the checklist weren't being due to the additional burden these put on staff. In particular, she highlighted the delirium assessments –

> *"…the delirium assessment…that's gone from low to high…because they weren't doing it at all…I put it in the admission packs, so the daily delirium assessment checklist is in the admission packs."*

SIL2 had noticed that the delirium assessment was often simply being forgotten because it wasn't a part of the standard procedure, meaning that it required an "extra step" by staff to remember to find the documentation and complete it. By making a simple change (including these assessments in standardised admission packs for all patients), SIL2 saw a noticeable improvement in the checklist score for this element. As she streamlined processes, SIL2 created opportunity for staff to implement changes, by making certain documentation easily available and therefore straightforward to complete. This straightforward change reduced the burden on staff, making this behaviour habitual rather than a concerted effort.

…sustaining change

Like SIL1, SIL2 expressed pessimism for the long-term sustainability for the ERP and the changes that she had effected during her time in her role. She saw the presence of a SIL as intrinsic to the ongoing driving of the ERP aims –

"…if you put things in place and you haven't got somebody driving the change, if things are like put in place and then I go back full time [as a ward sister], will they carry on when I'm not there…"

She saw her role as vital to the change process: although the ward staff were the ones who had to change their behaviour in order for the pathway to be enacted, the SIL was the person at the centre of the change process. I asked SIL2 how she went about "driving" the change, as she described it, and she identified key other people whose existing motivation she had capitalised on –

"I've got champion type nurses on the wards who are working who are, I keep informed of what I'm doing, and are up to date with the changes to the checklist and why we need to be doing these different things so they're working on the wards, rather than just having someone from the outside coming in saying you need to do this….to try and sustain it when I'm not there…"

By identifying people to act as champions for the ERP, not only did SIL2 adopt a tactical approach working from the inside (i.e. established ward staff able to push the agenda from the frontline), but she was also thinking longer term, about how the pathway will still be a priority beyond her time in the SIL role –

"If you haven't got somebody driving change, change doesn't happen…it just stops. Because it will revert to what we've always done."

I had initially thought that SIL2 saw herself as the sole person capable and responsible for pushing the ERP agenda, so I was pleasantly surprised to find she thought of the bigger picture in this way. She saw that the role of SIL was vital to change, but also that it was simply a role, and not intrinsically attached to her personally.

I found this strategic approach as promising, demonstrating that SIL2 had considered how she could reduce the overall burden on herself. However, she also explained that as she knew she would still be working as a member of staff on the same ward, she expected (and to a certain extent, accepted) that the overall responsibility of driving the ERP agenda would continue to fall to her even once her role had ended, even if this meant assuming an extra burden on her time –

"…am I going to have to try and drive it and do my full time job as well? Which is what I think's gonna happen….I think it will fall to me, and I will be able to do it, so I think it will…I'll just end up with it."

This assumption and acceptance concerned me: even now while she was employed specifically as a SIL, she had expressed challenges in managing her time, and to expect to continue as the sole driving force for maintaining the ERP whilst being a full-time ward sister struck me as unrealistic.

…the importance of context

Noting the differences between the resources available in her own hospital, and those available to the other two SILs, SIL2 highlighted how contextual differences affected ERP implementation –

> *"…the trouble with the ERP is that it's reliant on resources, and each Trust is, they have different resources in each Trust, there's no set say for staffing, so like one of our SILs has got these engagement support workers….I haven't got that, and yet I've got three times as many patients…"*

She contemplated this in terms of national issues, and emphasised that the same ERP plays out very differently at different hospitals, due to differences in local demands and available resources –

> *"…we all need to have the same things in place, and just by doing the three different sites, it's just, the difference is worlds apart…"*

Even if standardising resources nationwide were possible, the three sites would still experience different patient numbers and demographics, and have different demands on their time. The same initiative will have different results in different contexts, and what had worked for SIL2 at her site may not work for future SILs at other sites, even if they are ostensibly similar. This realisation emphasises the need for an ERP which is to an extent flexible, able to be adapted to match local demands and available resources. It also suggests that SILs must be able to think creatively about how to utilise their available resources to meet the demands of the ERP within their site.

Working With Others

…existing relationships

One of SIL2's key resources were her existing relationships with ward staff. She had spoken at length in her first interview about how she was already working collaboratively with her ward colleagues to make meaningful changes on the ward. She carried this further in this second interview, and discussed how the ward staff's intrinsic motivation for the project has been key to its success so far. She had found it easy and beneficial to solicit advice and guidance from her colleagues, and this helped her to overcome challenges in the implementation process –

> *"…I've already got a good relationship with them and I can say to them, these are the results, what do you think else needs to be done?...I've already got those*

relationships, so I think that's quite important, and I think if you haven't go those, I imagine it's going to be quite difficult, because I appreciate that I've been quite lucky, in that I'm already in a fairly senior position and I'm coming in and I'm saying "we need to do this"…"

SIL2 appreciated that her position of authority has served as an important facilitating factor in implementing change at her hospital, and speculated that had she not had this advantage, she would have found the process far more challenging and time consuming.

She also utilised existing relationships to identify and assign suitable "ERP champions" to assist her in driving the pathway agenda on the wards. These worked as part of her own, small, self-developed team, lessening her burden of responsibility and making her role more manageable, both in the short and the long-term of the pathway –

"…I've got champion type nurses on the wards who are working who are, I keep informed of what I'm doing, and are up to date with the changes to the checklist and why we need to be doing these different things, so they're working on their wards, rather than just having someone from the outside coming in saying you need to do this….to try and sustain it when I'm not there…"

As SIL2 was implementing the pathway across three wards, only one of which she had worked on previously, she was aware that her relationship with ward staff was stronger on her own ward than on the other two wards. She anticipated that this lack of familiarity (context) would pose additional challenges to implementing the necessary changes, and decided to manage this by delegating some of this responsibility to nurses "on the inside". By doing so, she had, to a certain extent, duplicated her own position: she created sub-SILs, who had existing relationships with the staff they would be working with, and were therefore arguably better placed to affect change there. In doing so, she also identified appropriate people to drive the pathway in her absence, such as periods of leave, or after her role has concluded. This "distributed change agency" helped SIL2 to overcome challenges to staff engagement and motivation.

…being part of a team

Since the start of the project, SIL2 had strongly identified herself as a member of the hospital team. However, during the course of this interview, it was clear to me that this was not the only "team" she considered herself a part of. As well as the team of "ERP drivers" at her hospitals that she had developed, described above, SIL2 had realised the significance of peer support she gained from the other two SILs. Regular meetings and discussions between the SILs not only helped them to support

one another in affecting change within the ERP's development, but also served as a way to help them clearly define their role and its responsibilities, giving them a greater sense of personal identity.

I had thought that developing a stronger identity as a member of the SIL team meant a natural distancing from the research team also occurred (as it seemed to have done for SIL1). This doesn't appear to be the case for SIL2. In our first interview, SIL2 was very frustrated with the research team and the research process, and discussed at length how she went about subverting the research project in order to pursue her own goals. In this second interview, her attitude towards research seemed to have softened somewhat, and while she still expressed some frustrations, she accepted that there was a set process that was beyond her control -

"…I've probably learnt how long everything takes in research….it's not a speedy process….and how strict it is in research…."

Although this in itself was a source of frustration for SIL2, it suggested to me that she had accepted that she needed to work with this process, rather than against it. She had seen how the SILs could work cooperatively with the research team to develop the design of the pathway, and this may have gone some way to making her feel more comfortable and positive about the research process, and PERFECTED as a whole.

The SIL Role

…perception of the role

Even though she has developed a more meaningful working relationship with the research team, SIL2 still expressed frustrations with the research process. She spoke about her early expectations of the project, and that she had thought her role would only involve implementing a tool and collecting adherence results. She felt almost as if she had been mis-sold the role –

"I don't feel it was made clear at job interview or even in the early stages, even when we came here, that we, they, we were more involved in the process of developing the tool…"

That the role involved more responsibility than expected and the lack of clarity around her responsibilities is another source of frustration for SIL2. She reflects that had she been aware of the expectations of her role, she would have been more proactive in giving feedback about the checklist –

"…if we'd have known we were doing the tool, we could have all said at the first cycle, there's nothing dementia related on this checklist…"

SIL2 puts the onus of blame on the research team, and reflects on all the things she would have done differently, if only she had been aware the level of influence she held over the design of the pathway –

"If I had realised it was to do, we were more to do with the process, I think I would have identified that earlier."

Although overall SIL2 was a confident professional, proud of the achievements in the project, this section of dialogue expressed her regret for things that could have been achieved more proactively, and to an extent, her bitterness about this, which could have been avoided. In an effort to support and clarify the role and the project, the PERFECTED research team conducted a teleconference with the SILs, specifically focused on clarifying the pathway and its rationale. In reflective notes taken by a PERFECTED researcher at the time, it was noted that the SILs found this process very helpful as it increased their understanding. This was particularly useful in challenging some of SIL2's assumptions around the evidence-base of the ERP, which were preventing her from triggering generative mechanisms regarding promoting the ERP amongst staff. The PERFECTED researcher noted, "the SILs really value discussing things with [Senior UEA Team Member] and finding out the rationale behind the items [on the checklist]". I hoped that this greater understanding of the ERP and its rationale (context) would better enable SIL2 to act as a central contact regarding issues and questions from staff (mechanism) and increase pathway adherence (outcome).

SIL2 conceptualised her role similarly to SIL1, describing herself as someone who was driving and coordinating the process of change –

"…somebody who can come in and say, we need to do this…someone driving the change otherwise…it won't happen."

…important skills

When we discussed the qualities needed for a SIL, SIL2 spoke about how her background had been advantageous to her position. Having worked on her ward for nine years, she was familiar with many of the staff she was now managing in her SIL role –

"I've already got a good relationship with them and I can say to them, these are the results, what do you think else needs to be done?...I appreciate that I've been

quite lucky, in that I'm already in a fairly senior position and I'm coming in and I'm saying "we need to do this"…"

Although SIL2 didn't directly state that existing relationships with staff were vital, it was clear that she used these relationships to their fullest advantage, exploiting her authority to implement change. Without these relationships, her experience would have been considerably more "difficult" and she would have to adopt an entirely different approach.

Thinking forwards to the next phase of the PERFECTED project, SIL2 hypothesised that the next cohort of SILs would have a more straightforward role, as they wouldn't have the responsibility of developing the checklist, only implementing it (similar to a traditional ERP implementation process). With this in mind, I asked her what she considered vital to the SILs' success in the role, and she focussed primarily on personal attributes rather than practical skills or background/experience –

"…they're gonna have to be positive about change, because a lot of people are negative regarding change, and a lot of people think that they're already doing what's best for patients…just because you get knocked back, don't sit there negatively thinking…"

A positive attitude, realistic expectations and perseverance were central to SIL2's attitude towards effective change agency. These qualities, paired with her existing relationships with ward staff, have been key to her implementation success, and form her template for effective SILs in the future. I found it particularly interesting that she didn't describe specific skills or experience, and began to wonder if recruiting a change agent from the nursing cohort was in fact a non-essential factor. Certainly the majority of existing ERP literature describes ERP change agents as being from a nursing background, but I suggest that the skills and attributes described by the SILs in this process could be met by professionals from backgrounds other than nursing.

…purpose and focus

In her first interview, SIL2 had described how she was "ticking the boxes PERFECTED wanted [her] to tick" whilst she focused her real energy on pursuing the goals she felt were personally more important. At this stage in the process (eight months into WP2), she was still conscious that not everything she did was directly specified on the PERFECTED pathway, but did have an impact and influence which was related to PERFECTED's aims –

"…there's things that come up that you think that aren't necessarily directly related to the checklist but can equally be related to the checklist because I'm

always looking at hip fracture patients and whether they've got dementia or not…"

Again, this signified to me an important development in SIL2's attitude towards the WP2 process: where she had initially been quite dismissive of the research process, she was now more conscious of how her own personal aims and the aims of PERFECTED WP2 related. She was also now more conscious of the challenges of splitting her time between her ward role and her role as a PERFECTED co-researcher –

"…it was really difficult before Christmas, combining the two roles, because my ward sister had gone off with stress, somebody else was off sick, yeah so I was sort of trying to run the ward, and do the 22.5 hours [as a SIL] and then it was just, it was quite difficult for me…"

SIL2's acceptance that the role involved more responsibility and took up more of her time than she had expected signified an important shift in her attitude towards the process, and she began to seriously consider how the process would continue after her time in the role concluded. The demands on SIL2's time was a factor also apparent in the PERFECTED generated data, which often noted that she ran late for pre-arranged meetings with PERFECTED researchers, was sometimes absent from teleconferences due to other responsibilities, was frequently interrupted by colleagues while taking part in teleconferences, and spoke of how she had been delayed in fulfilling her responsibilities due to other demands on her time.

Reflections on SIL2's second interview

During this second interview, I was struck by SIL2's expressions of regret and ruminations on how things could have been done better. I had the impression that she felt hard done by, not only because she felt her expectations of the role were not met, and her frustration with the slow pace of research (regarding making changes to the checklist), but because she was asked to implement things that she felt were impossible and unrealistic. This more negative side of SIL2 came as a surprising development since our first few meetings, where she had come across as a confident professional, un-phased by challenges.

However, this reflection was not all negative, and I felt that SIL2's attitude had shifted to a more realistic appraisal of the challenges faced by SILs. In her first interview, she seemed to me almost over-confident in her ability to manage three wards as a SIL, and continue in her role as a ward sister. In this second interview, she accepted that this balance was not as straightforward as she had first thought, and she began to realise that certain challenges were unmanageable on her own. She

had always had an appreciation of her existing relationships with ward staff, and how these had helped her achieve her aims, but in this interview, she was focused more on the benefits of the peer support she received from the other two SILs.

4.7.4.4 SIL2 Interview 3

I conducted the final round of interviews in a quiet room at the UEA, as part of a scheduled SIL site visit. My opening question was to find out what SIL2 had been doing since we last met, and she began by explaining she had been asked by the research team to complete a further cycle of the checklist, beyond what had been originally planned. As the PERFECTED WP2 research process was winding down at this point, there was less PERFECTED generated data available for me to use within my analysis, and this section of the narrative is predominantly informed by the SIL interview generated data.

The Research Process

…expectations and frustrations

SIL2 didn't seem sure why this final extra audit cycle had been requested ("I don't know, it came out I think from a teleconference…") but hypothesised why it would be worth doing this –

> *"…it probably would be worth looking at the results and seeing if it continues whilst sort of I've had to step back, cos I've had two weeks' annual leave June/July…probably it would be a good idea to analyse the scores, but I think I won't have the time to do it."*

This attitude signified a marked change in SIL2, who had originally seen the process of research as frustrating, unnecessarily convoluted, and a barrier to effecting the changes that she wanted to make. Over the course of the research process, SIL2 had developed an understanding of how research is conducted, and now had a vested interest in measuring how the ERP is sustained in the longer term.

…sustaining change

Again, SIL2 expressed concerns regarding the longevity of the pathway, and explained the steps she had taken to try to ensure it would continue to be a priority beyond her time in the role of SIL, by giving "ownership" of the pathway to staff on the ward –

> *"…just trying to make sure staff on the ward, across the wards still know the expectations and still know the ideal and we'd still like this to carry on, and this needs to just now be embedded…."*

SIL2 was still aware that the pathway was unlikely to succeed long-term without active driving from ward level –

"…you still need drivers and champions to instil a role model and do all that…"

Which, reflecting back on her earlier interviews, I remembered SIL2 saying that she had actively identified nurses in each ward to champion this coordination. However, even this forward planning wasn't infallible, even when SIL2 was still in post –

"…one's been off sick…so when she was absent from that, "your scores have gone down, what's happened there?" she was like…"oh I've been off sick"…So when she's off it sort of stops, so it's like, how is it going to continue?"

Despite her proactive work on the wards to distribute change agency in this way, at this late stage in the process, SIL2 was still struggling to get the pathway firmly embedded in practice, and she was frustrated by the reliance on one or two key people having to carry the responsibility of pushing the pathway. Later in the interview, she revisited this subject by stating that she intended to push the pathway beyond her role as SIL –

"…I have a plan, I have applied for the ward sister's post…and then they'll have no choice then! They'll have no choice, it'll continue…"

We both laughed at this point, and although I found it heartening to know that this project had become so important to SIL2 that she was willing to make calculated plans about how she could continue to drive the pathway into regular practice, I was also concerned that this was an example of nurses going above and beyond the call of duty. She had spoken previously about how, in her previous role as a ward sister, she had no spare time to concentrate on additional responsibilities beyond her ward duties. This had also been noted in previous field notes from PERFECTED researchers. I wondered how she imagined she would covertly continue her SIL duties alongside her already demanding ward role.

…managing challenges

Although I had concerns about how SIL2 planned to manage the challenge of long-term sustainability, on the whole SIL2 demonstrated that she had a pro-active and effective approach to managing the various challenges of pathway implementation. Throughout her twelve months in the post, she put a strong emphasis on the importance of involving a broad range of staff in the implementation process (as a mechanism for collaborative problem-solving, thus increasing pathway adherence), capitalising on their existing motivation for the project –

"…they already were quite passionate and I think they already had an understanding…they already had the skills already…like prioritising or recognising when things needs to be done…"

She did encounter some early reluctance from some staff members, and attributed this to the research process –

"…there's been people who, because you had to sign a consent at the start, so people were wary of that, and didn't want to take part in it because they were signing something…"

And she confessed that she wasn't sure how to manage this issue, as she stated "I don't know research and I don't understand it". I was slightly concerned by her dismissiveness of this issue, as it again reminded me of her earlier attitude towards research as being a barrier to what she felt was more important. However, her attitude to many barriers followed a similar, minimising approach. With many of the changes, her preferred strategy was to explain to staff the rationale for the change, and convince them that the change would, in the long-term, benefit both staff and patients, by improving care whilst simultaneously streamlining existing processes –

"…I think there's a certain amount of resistance to change, but actually when you point out that they're going to be taking your time anyway, visitors, they will take your time, so do you want them all to take your time at half past two, so you've got a queue of people waiting to see you, or do you want it spread throughout the day?"

Part of overcoming challenges was to change staff's perceptions of the "additional" tasks: she wasn't seeking to add to their burden, but to combine tasks to meet the requirements of the pathways -

"…just do their blood pressure when you're getting them out of bed…I'm not asking you to do anything extra, I'm just asking you to put it together…"

By anticipating resistance to change, SIL2 was able to prepare and strategically plan how she would overcome this, by discussing the issue with staff members and proposing potential benefits to the change. Another key strategy SIL2 used was to appeal to staff members' empathy, by relating patient and carer issues to their own situations –

"…also, a lot of them have got children. So I'm like, if your child was in hospital, and I said to you, you can't come in 'til half past two, what would you say to me? You wouldn't have it, as a mother. So why are we expecting, you know…"

Although I did wonder how many of the checklist elements could be addressed in this way, I appreciated SIL2's creativity in managing the various challenges in implementing the changes she intended to implement. SIL2's existing rapport with staff and intimate understanding of their experiences (context) enabled her to create effective strategies to engage and motivate them (mechanism), increasing ERP engagement and adherence (outcome). This made me consider SIL1's approaches to problem solving under similar circumstances, and I speculated how these options were closed to her, given her different professional background.

…the importance of context

The SILs were at the UEA on the day of our interviews for a scheduled induction day for the SILs employed as part of the next phase of the PERFECTED research project. All three of the SILs I had been working with were due to give presentation to the new SILs to discuss their experiences and offer guidance. I asked SIL2 what sort of advice she intended to pass on, and she explained that part of her presentation would focus on her own background and the context of her hospital, and how this had affected her approach to implementation –

> *"…it starts with a bit about me and…a bit about my Trust and site…and a bit about why I picked the focuses I picked, because I'm from a nursing background, I think it depends on your background…."*

She also cautioned that her existing relationships with staff shaped her approach, and this may not be suitable for everyone. I found this reflective awareness of her own personal context interesting, as she appeared to imply that although she used her situation to her advantage, someone else (contextually distinct) in her role could achieve the same outcomes via different mechanisms. She did offer some ideas as to how this may be overcome, and highlighted the importance of having an insight into working on a ward –

> *"…it's quite difficult to get someone from another area come in and tell you…how things should be done…if they're not from that area, there's an understanding of that, or they even do a couple of shifts as the nurse or as, if you're wanting to get the nurses to change practice, you need to understand the challenges they face on a daily basis…"*

SIL2 had previously spoken about her reservations about SIL1's lack of ward-based experience, but this acknowledgement that this barrier can be addressed suggested that SIL2 appreciated the successes SIL1 had in implementing the ERP at her site. Although SIL2 had found her background as a ward nurse and existing professional relationships to be key facilitators to affecting change, she

recognised at this stage that there is more than one way that successful implementation can be achieved.

The SIL Role

…important skills

Rather than focussing on a background of working on a hospital ward, SIL2 discussed a number of key skills that a SIL should possess. As in her second interview, SIL2 again highlighted what she thought were the most important qualities of an effective SIL –

> *"…they're going to need to be motivated, they're going to need to be passionate, they're going to need to inspire the want of change in others, I think they're going to need to be, managed their own time, I think they're gonna have to have good leadership skills."*

I was interested to know to what extent SIL2 felt she already had these skills, and which skills she had to develop over the course of the project. She explained that time management had been an important skill she had to develop, as at the beginning of the project she had unrealistic expectations about how much spare time she would have to complete certain tasks -

> *"…the time management, because when I first started I was thinking, what am I gonna do this week?...I thought oh how am I gonna fill my time, but now I'm like…I've got stuff still to do when I get back."*

Once again, I was concerned about SIL2's ability to manage her time effectively, and still fulfil all of the tasks assigned to her. Since the start of the research process, SIL2 had confidently taken on more responsibilities than the other two SILs (implementing the pathway across three wards rather than one), but had soon recognised that this presented additional challenges that she had not anticipated. Despite acknowledging that she was struggling to manage her time effectively, she still insisted that the responsibility of driving the pathway agenda would fall to her, even once she had returned to her full-time post as a ward sister (as discussed above). That being said, SIL2 had identified a few key colleagues to assist her in managing the pathway, and I hoped that this would continue in the long-term, so that they responsibility was shared, and wasn't an extra, unmanageable burden for her in future.

…personal development

SIL2 also explained that her people and communication skills had developed, which came as something of a surprise to me as I had thought SIL2's people skills to be one of her key strengths already, especially considering her existing relationships with ward staff. However, she explained

that this development had come from having to work with and communicate with different staff groups across the ward –

> *"…you meet with a lot of different people from a lot of different backgrounds, and how you get your point across to those people and try and take them with you and what you want them to do, and that sort of thing."*

This is an important realisation for SIL2, who I had felt had perhaps been overly reliant on her position of authority (context) as a means to drive the pathway into practice (mechanism). I hoped that by including this in her presentation, she would be able to emphasise to the new SILs that different staff groups may need to be approached in different ways in order to get them onboard.

…purpose and focus

As previously mentioned, when she commenced in post, SIL2 struggled to see the research process as much more than a necessary hurdle she had to overcome in order to improve care in a way that she saw fit. Although she still expressed some reservations about research at this late stage in the project, her views had softened somewhat, and she was able to appreciate some of the other advantages that the structured research process had brought to improving care.

Notably, SIL2 had emphasised throughout the research period that her primary concern was improving patient care, and initially she had seen the research process as obstructing rather than aiding this aim. In this final interview, although she still resisted embracing research fully ("I don't know research and I don't understand it"), she was able to appreciate the benefits of the formal research approach –

> *"…I was just happy to have the time because I'd wanted to do different things over the past few years, but when you're just engrossed and embedded in you ward, there's no time."*

SIL2 still conceptualised PERFECTED WP2 as an opportunity to "free up her time" to pursue her own preconceived care improvement aims, but was able to relate the changes she had made to the checklist. She also saw the wider benefit of the project drawing a close focus on a specific, vulnerable patient group –

> *"…I would just hope that, it's, they would appreciate it's on our agenda, so if someone said "do you do anything for patients with dementia and trauma?" they would be able to say "yes we do, we do this". Just so they are aware of the things that I've implemented…"*

While SIL2's aims and the aims of the PERFECTED research team were not always parallel, she had followed the process to the best of her ability throughout, while also pursuing the goals she believed to be most important.

Working With Others

…motivation

On the whole, SIL2 described the staff on her ward as being motivated to be involved in the research and pathway process, but there were times when morale was low and she had to use her initiative to keep them engaged. She explained that "morale on NHS wards is quite low anyway", and that the wards she was working on were particularly challenging, due to the demands of the work and difficulties recruiting and retaining sufficient staff. One of the simple strategies which SIL2 adopted was to explicitly recognise the hard work that staff put in, both verbally -

> *"…everybody likes to be told "thank you" and everybody likes to be told "you've done a really good job"…"*

And demonstrably –

> *"…so they would get a certificate and a box of chocolates, so they would get some recognition…"*

While she recognises that intrinsic motivation is vitally important ("…they choose to be a nurse because they want to make a difference…"), she also highlights the value that this simple act of recognising their efforts can make. It can also be practical for staff –

> *"…I've got a certificate for them all at the end of the study just to say thanks, with their name on, and then on the back for the trained nurses…it's sort of an opportunity for them to say they've been part of this study as part of their revalidation…"*

Being a nurse herself gave SIL2 an appreciation for this practical reward, and I got the impression that she wanted to ensure that her colleagues not only had something tangible to show for their efforts, but knew that they were appreciated and valued. Relating this back to the programme theories developed through my realist synthesis, SIL2 used these reward and recognition strategies as a means to ensure the staff felt valued and supported (context). This in turn bolstered their motivation and engagement with the process (mechanism), which in turn facilitated ERP adherence (outcome).

…being part of a team

SIL2 considered herself to be a member of several different teams, to a variety of degrees, but from her first interview through to her last, it was clear to me that the most important and valued team to her was her team of hospital staff. These were colleagues that she had a long-standing professional relationship with, had been key facilitators in implementing the PERFECTED ERP, and provided her with important guidance and support. While not every stage of the process has been straightforward ("… "we haven't got the time to do that" becomes the first response to everything…"), SIL2 recognises that without her colleagues' enthusiasm and expertise, this project would not have been possible –

> *"…they already were quite passionate…they already had an understanding….they already had the skills…."*

Reflections on SIL2's third interview

In SIL2's final interview, it was clear to me how important this project had become to her. From the early stages in the project, I had the impression that this was a role she had almost been coerced into taking (her PI had convinced her to take the role, as she had no interest in being involved in research), but by this point, she was clearly, genuinely proud of what she and the staff had achieved, and anxious to continue that progress forwards. As with many healthcare staff I had worked with in the past (both in a research and in a clinical capacity), SIL2 was willing to put in considerable extra work, beyond the requirements of her role, to ensure that the pathway continued to be embedded in practice.

Although I admired her commitment to the process, and her pride in her achievements, I was concerned about her ability to sustain this effort in the long-term, when she returned to her full-time ward role. She had mentioned several times throughout the research period that, prior to taking up the role as SIL, she did not have time outside of her ward duties to pursue ward improvements that she felt were important, and I didn't understand how she thought this would be any different once her time in the SIL role had concluded. She had made some efforts to delegate some of this responsibility to her "PERFECTED champions", but had already identified issues with this, even before her role had formally ended.

4.7.5 Implementing PERFECT-ER in Hospital 3

4.7.5.1 Background

SIL3 was a staff nurse based in a large town in a predominantly rural county. Her hospital was one of two district hospitals which are joined by one Foundation Trust, and her hospital receives all of the trauma cases for the area. She worked predominantly on the neck of femur ward, but due to bed

flow, they often received other trauma patients as well. She qualified as a nurse in 2007 and worked in elective orthopaedics for five years, before moving to orthopaedic trauma. She was first attracted to the role as SIL as she had an existing interest in improving care for her patients with dementia.

> *I first met SIL3 at the informal team dinner as part of their induction at the UEA. She struck me as a very personable and approachable individual, and was easy to talk to. She had a casual, informal way of speaking, which, coupled with her regional accent, made me warm to her immediately. While she voiced some uncertainty about the role at this early stage, she seemed comfortable and accepting of this uncertainty, and eager to get started in the role.*

The most prominent theme within SIL3's narrative was "working with others": SIL3 strongly emphasised the importance of getting as many staff engaged and involved with the project as possible, and used a variety of strategies and creative approaches to achieve this. She emphasised that engaging with all staff groups was a vital part of "the change process". Although engaging with staff was not always straightforward, SIL3 used her initiative when faced with the challenges of "the SIL role". A summary of the themes developed from SIL3's interviews is given in Table 6 below.

Superordinate themes	Sub-themes	Interview
The SIL role	…motivation and focus	1
	…personal challenges	1, 2, 3
	…personal skills	1, 2, 3
Working with others	…engaging with staff	1, 2, 3
	…team working	1, 2, 3
	…staff as barriers to change	1
The change process	…local context	1, 3
	…expectations and frustrations	1, 2, 3
	…the bigger picture	2, 3

Table 7: Themes from Hospital 3's dataset

Prior to my first round of interviews with the SILs (in month 5 of their time in role), the SILs had completed two checklist and action-planning cycles. For the first of her action-planning meetings, SIL3 chose to run this across two days, to increase staff participation (as not all staff who wanted to attend could make it on the same day). SIL3 provided Nursing & Midwifery Council (NMC) forms so that attending nurses could use the action-planning process as part of their continuing professional development requirement. This acted as an added incentive for nursing staff to participate in the action-planning process. In their field notes, the attending PERFECTED researcher describes a well-attended meeting, with a "friendly and jovial atmosphere", but that the most vocal staff members

were senior staff, potentially reflecting power dynamics on the ward, as "senior staff are used to influencing practice". Although multidisciplinary meetings such as this can provide an opportunity for different staff groups to discuss their different ideas and collaboratively problem solve, when senior staff members are in attendance their presence may intimidate less senior members of staff, who might feel unable to contribute. For these staff members to feel comfortable contributing their perspectives (outcome), they might require additional input from the change agent to make them feel sufficiently valued and respected (context), enabling them to engage in the consultation process (mechanism). SIL3 appeared conscious of this, as the PERFECTED researcher notes that she "went round to the quiet attendees and engaged them in discussions", demonstrating her appreciation of the input from all staff groups. The PERFECTED researcher noted that none of the attending staff gave "any indication of annoyance or disappointment" regarding checklist items scoring poorly, and one staff member took notes throughout. The field notes from this meeting give the impression of a collaborative and positive atmosphere, with staff motivated to improve healthcare provision.

By the second cycle, SIL2 was able to demonstrate noticeable improvements in ERP implementation, and in the PERFECTED field notes, the researcher notes that the second action-planning meeting again had a positive atmosphere. They noted that the meeting was truly "collaborative and the SIL showed them that she respected their specialism and input". This is further demonstration of SIL2's ability to ensure staff feel valued and respected (context), encouraging their engagement in the consultation process (mechanism) and enabling them to identify and manage practical barriers to ERP implementation (outcome). It also helped different staff groups to communicate with each other, and facilitated open discussion between these groups (mechanisms), improving their inter-disciplinary understanding of the ERP as a whole, supporting and encouraging each other to achieve ERP adherence (outcomes).

4.7.5.2 SIL3 Interview 1

I conducted SIL3's first interview at her hospital site. Before the interview, SIL3 gave the other two SILs and I a brief look around her ward and told us some background about the site. She was calm and casual, and appeared to be comfortable being interviewed by me. We held the interview in a quiet room away from the wards, and SIL3 began by giving me a brief background about her hospital and her experience as a nurse. This naturally turned to her explanation of how she came to the role of SIL –

> *"I saw this job advertised and I've already got an interest in trying to get some stimulation things sorted…improving care. On the trauma wards, yeah."*

The Change Process

…expectations and frustrations

When I asked SIL3 about her expectations of the pathway, she explained that she had expected "loads of practical ideas on how to deal with the problems that we come up against on the wards". She explained that she had been to a consultation meeting in London in the early design stages of the pathway, so she knew some of the elements that would be on the checklist, but wasn't sure how the role of SIL "was gonna work with that". She showed an eagerness to be informed and involved with the project, even if, by her own admission, she wasn't entirely sure what her role would involve or how much of an impact she would have on practice.

SIL3's primary motivator for becoming involved with PERFECTED was to improve patient care, but she was acutely aware that she was part of a set research process, and she knew she had a duty as a researcher to follow that process as closely as possible. When she was first given the checklist, she reflected that even though it wasn't what she had expected, she was able to find practical ways to make the checklist items relevant to practice and to staff on the ward -

> *"It wasn't what I expected but I thought, that's alright, I can make this work too, we'll work round it. And it's how I interpret it, so if I think that falls relates to signage, well let's look into that, provided I can relate it back."*

Like the other two SILs, SIL3 expressed some initial disappointment regarding the design of the pathway, but unlike the other two SILs, this didn't appear to bother her for very long. She adopted a very practical and accepting attitude, and maintained her focus on improving care on her ward, within the processes as required by the research project. I was impressed with SIL3's practical attitude, and the fact that she did not let her own expectations impede her progress in the process. Unlike the other two SILs, whose initial disappointment with the ERP acted as a barrier to their engagement with the process (at least to begin with), SIL3 sought to explore the pathway further, creating added value and relevance within her local context.

SIL3 demonstrated a good awareness of the potential for her focus to be drawn away from the research process, and on to other care related priorities, but her awareness from this early stage made it possible for her to continually check that all of her activities in her role as SIL were related back to the pathway –

> *"…what I do is, I just work on the wards, and each week I sort of look at something as it comes up, like last week we were looking at footwear, and that relates to the checklist…"*

Unlike SIL2, who had explained she used the PERFECTED process to pursue her own aims, SIL3 continually related everything she did to PERFECT-ER: by exploring her ideas within the context of the pathway, she demonstrated her understanding of the ERP and its rationale (context). This enabled her to act as an effective central contact regarding the ERP (mechanism), helping staff to understand the ERP and their roles within it (outcome).

…the local context

From this early stage, SIL3 already demonstrated an awareness of how her experience of ERP implementation was fundamentally different from the other SILs, based on her own background and experience. She appreciated that they were different people, with different perspectives, and as a result, approached the pathway and the checklist differently –

> *"we all view the questions in different ways, and it's, how I interpret it is very different from how they interpret it…"*

She recognised that this difference in interpretation might limit their view of the checklist, and as a result would affect the outcomes which they achieved at their site. However, SIL3 tried to remain open-minded, and valued the different perspectives she gained from sharing experiences and discussing the checklist with the other two SILs -

> *"it's really useful to hear what they've done and how I could make it work in my Trust."*

While she found the support and sharing of experiences with her fellow SILs useful, she was still conscious that she had to adapt her approach to best suit her context, experience, and available resources. SIL3 was able to utilise the skills and knowledge of others, whilst remaining sensitive to the specific needs of her local practice (context), enabling her to identify how best to address local challenges and barriers to implementation (mechanism) and achieve greater ERP adherence and ultimately improve implementation success (outcome).

Working With Others

…staff as barriers to change

SIL3 explained that at times, the staff themselves were a barrier to implementing change. Sometimes, this was to do with specific, personal issues –

> *"…I had a physio, lead physio's quite difficult because she wanted to do this job…she was under the impression that she knew better and she knew what everything was, so I found that a bit difficult…"*

But even with such a personal issue, SIL3 managed to work creatively to nurture this professional relationship, and get the staff member motivated and involved in the implementation process, by emphasising how important her role was in the bigger picture –

"…I explained to her how I could get physios involved, and what I'd like her to do, you know it's been a lot better since…"

This was not simply a case of massaging one individual's ego, as SIL3 demonstrated how important it was to value the input from all staff, in order to work collaboratively and effectively –

"…I've tried to say how important her physio input it, but I think I do that with everyone…I want everyone me, I'm so greedy! [both laugh]"

SIL3 demonstrated an awareness and appreciation for all staff groups affected by the pathway. She spoke at length about the important of getting everybody on board with the implementation process, as she felt strongly that everyone's input was valuable. This was also reflected in the PERFECTED generated data: SIL3 worked proactively, using a variety of tailored approaches to ensure all staff members felt valued and respected (context). This increased staff motivation and engagement with the implementation process (mechanism), ultimately improving ERP adherence (outcome).

…engaging with staff

She highlighted that her approach to engaging with staff was different from the other two SILs –

"I know that the other girls [SILs] like, have a lead from each ward, whereas I invite everyone. Like, literally, everyone. So I invite all the doctors, all the healthcare [assistants], all the nurses, all the social workers, anyone who actually comes onto [the study ward] at any point and has anything to do with these patients…the more people talking about it, the more interest I'm gonna get…they're the people who work with patients, they're the people gonna make the changes."

She made particular efforts in getting non-qualified staff (such as healthcare assistants, or HCAs) involved with the project, as she felt that their opinion was often unheard or overlooked –

"…I don't think our healthcare assistants have enough confidence speaking out about how they feel and what they think. And I'm trying to get them to get their opinions across because yes they're not staff nurses but they are people who

wash these patients, feed these patients, and they're just as important to me, if not more important."

I found SIL3's attitude towards the involvement of HCAs refreshing and reassuring, as I reflected back to my realist synthesis that this was a staff group which was often overlooked in the implementation process. Having previously worked as an HCA myself, I agreed with SIL3 that the HCAs had important experience working with patients, and that their insight and involvement in the implementation process could be valuable. SIL3 recognised that the HCAs chose to remain quiet in the action-planning meetings (she hypothesised that this was due to a lack of confidence in the multidisciplinary setting, "in a meeting environment they're really, really nervous"), and so used her initiative to engage with them in a different way –

"…I'll do a lot of talking one-on-one, I'll go "oh I'll give you a hand washing so-and-so" and as we're washing so-and-so, I'll say "oh, what do you think about them slipper socks, d'you think she's managing with them?"…so I get a lot of opinions that way."

Again, this was supported by PERFECTED field notes from action-planning meetings, which highlighted that SIL3's "bottom up approach was in real contrast to …the more "top down" approach…observed at another site". Here, SIL3's experience of working as a staff nurse, combined with the personable and approachable attitude I had observed when I first met her, made this method of engaging with staff natural for her. Neither of the other two SILs had described working with members of staff in this way, and I admired SIL3's creativity in using such a straightforward tactic to illicit opinions from the HCAs.

SIL3 used her initiative to make the pathway meaningful for all staff, and used creative, hands-on means to get staff engaged with the process –

"I take advantage of whatever's going on, and like, see how I can put dementia into that…the staff are going "oh what are you doing" and I'll say, oh I'm looking at nutrition this week, do you know how important it is that everyone's nutritionally screened when they come in to hospital, especially this group of patients, so then I relate everything I do back to the checklist by promoting the bits that I know to the staff."

Her initiative and creative approach gave her a foothold in forging relationships with ward staff, as she adopted a "quid pro quo" approach to implementing change –

"…I work with staff on the ward, but sometimes you do get dragged into doing like some of their work, but providing all the time you're talking about what you're doing, they get on really well with me then…"

By capitalising on her people skills and experience working as a staff nurse, SIL3 embedded herself in the ward team, and was able to push the agenda directly on the frontline, with the staff who would be enacting the changes required – "if I do a bit for them, then they're quite happy to share input with me".

…team working

Although SIL3 came from a ward-based background (as a staff nurse), the ward she was based at for PERFECTED was not one that she was previously familiar with. She knew a few of the staff members, but not as well as SIL2 knew her ward staff. However, this lack of personal familiarity with staff did not pose a significant challenge for SIL3: as mentioned previously, she was happy to talk to anyone, to make her presence known, to forge good relationships with staff. From these relationships came effective, collaborative problem-solving. SIL3 was able to quickly develop a good rapport with ward staff (context), enabling collaborative problem solving (mechanism) to improve ERP implementation (outcome). She felt strongly that the changes needed to happen from the ground up, and without the staff being engaged and in involved with the process, this could not be possible –

"…there's no point in me stood up there saying "do this, do that", because if it's not their idea, and they don't think it's gonna work, they're not gonna use it."

This wasn't just in an effort to make her life easier, but SIL3 saw the productive involvement of all staff as a fundamental component of the whole process –

"…my catchphrase for my meetings is, "we're making realistic, achievable goals, together"….that's the whole point of this research, isn't it? You know, there's no point me pushing it if they're not gonna get involved and engaged with it."

The SIL Role

…motivation and focus

When I explored her motivations for applying for the role of SIL, SIL3 explained that the staff on her ward had struggled in providing the right kind of care for patients on the ward who had dementia, despite previous initiatives –

"…we did have a lot of problems with our dementia patients, we had what we call POD, our Prevention of Delirium research, but that finished, like two years ago,

and since then we haven't really had any progress with this like group of patients…"

Even prior to commencing in her role as a SIL, she was aware of local practice and some of the challenges present in the ward (context), aiding her ability to identify training needs and potential structural barriers to change (mechanism). She explained that part of the difficulty was down to patient to staff ratio, saying "when you've got five or six dementia patients and one of you, it were just so hard". By specifying that the difficulty lay with dementia patients suggested to me that staff weren't adequately equipped to deal with this patient group, and SIL3 was eager to improve this situation if she could –

"…if there's anything I can do to improve that…then why not."

She was open to new ideas, willing to try anything that might improve both patient and staff experience, and willing to seize opportunities that might benefit her hospital. This was again demonstrated in the PERFECTED generated data, which described SIL3's action-planning meetings as genuinely collaboratively, with a broad range of staff contributing their insights and expertise.

Once her time in the post began, things began to clarify, but she was very aware of how easy it was to be distracted by other priorities that weren't directly related to the pathway checklist. I was impressed by SIL3's self-awareness, and her reflections on her own practice –

"I think you get pulled off a lot, into just generally how to make dementia patients better, and that doesn't always relate back to items on the checklist."

Although she split her working week between her role as a SIL, and her existing role as a staff nurse, her self-awareness of where she should focus her attention was always at the forefront of her mind. SIL3 demonstrated a good understanding of the ERP, its rationale, and her role within the process (context), enabling her to act as an effective central contact and coordinator for the implementation process (mechanism), and supporting ward staff in their understanding and engagement with the process (outcome).

…personal challenges

Like SIL1 and SIL2, SIL3 explained that the role of being a SIL was an inherently lonely one -

"It can feel quite lonely because everyone's so busy in the hospital focussing on their things that they don't always have time to talk to you about the checklist, you know it's not always the top of their priorities."

However, she did not spend much time discussing this issue, and it struck me that the feeling of isolation did not impede SIL3's progress in her role to any significant degree.

Also like her fellow SILs, SIL3 expressed some anxiety about her lack of experience in the SIL role, and how certain responsibilities of the role were challenges she had not faced before –

> *"I didn't have many good connections with like management and things like that so when it said things like implementing a hip fracture care strategy I were like I have absolutely no idea how I'm gonna do that…"*

But as with the other challenges she had described, SIL3 didn't allow her apprehension stop her progress for long: again, she applied her natural confidence and pragmatic approach to great effect –

> *"..but that's fine, because I'll just email loads of people, and see what I can do. So because I didn't have good connections, that was difficult, but I just kind of inserted myself into lots of management lives now [laughs]."*

As outlined in the programme theory I developed regarding change agency, SIL3's rapport with staff (context) allowed her to work effectively with ward staff to identify and manage barriers to implementation (mechanism), facilitating the change process (outcome). Despite some gaps in her pre-existing knowledge of local practice and specific expertise (context), this was mediated by her confidence in soliciting advice and expert guidance from appropriate staff members. This degree of problem solving may not have been possible if SIL3 had not possessed the level of self-efficacy and ward embeddedness that enabled her to engage with staff in this way, highlighting the importance of these attributes for the role of change agent.

….personal skills

Faced with these personal challenges, SIL3 seemed un-phased, and her casual confidence helped her to overcome most barriers during the early stages of the process. I saw her willingness and ease as key personal strengths, as she didn't allow her reservations to get in the way of her executing her role effectively -

> *"…get yourself in there…. I come from a Band 5 role so to suddenly go "ooh, I'm gonna have to speak to all these people". And when you see your managers you think they're really important, like, scary people, but just like bite the bullet and go for it…"*

This, combined with her creative approach to problem-solving, and a ready acceptance of things outside of her control, meant that SIL3 was not only able to fulfil the duties of her role to great effect, but she was not phased or personally affected by the challenges that came her way. Despite a lack in specific knowledge and experience (context), this was mediated by SIL3's sense of self-efficacy which enabled SIL3 to capitalise on staff expertise, working effectively with them to identify and manage barriers to implementation (mechanism). This was reflected in PERFECTED field notes, which frequently highlighted SIL3's ability to effectively solicit the advice of colleagues and peers.

Reflections on SIL3's first interview

Although SIL3 expressed some of the same challenges, frustrations and concerns that her fellow SILs had also discussed, she dealt with this in a far more accepting and relaxed manner. Her practical approach meant that she didn't spend much time worrying about things outside of her control, and she didn't take challenges or frustrations to be a personal reflection on her own ability. I greatly admired SIL3's ability to put aside her anxiety in order to get on with the task at hand.

Her ongoing role as a staff nurse meant that she was close enough to the "shop floor" that she felt it natural and comfortable to work alongside ward staff (embeddedness), and use this as an opportunity to discuss the ERP directly with them, soliciting their valued input. Although intimidated by senior staff and managers, she did not allow this to halt her progress, and pursued those staff members for their input with as much confidence and enthusiasm as she did her ward-based colleagues (self-efficacy). It was clear to me that SIL3's primary concern was improving patient care in a way that was also beneficial for staff, but she was acutely aware of her responsibilities as a co-researcher for PERFECTED. She was able to see "the bigger picture", relating all of her activities back to the content of PERFECT-ER. For someone who professed to have very little experience of working in research, I was impressed not only by SIL3's confidence and initiative, but by her conscientious approach to fulfilling her duties as a researcher.

4.7.5.3 SIL3 Interview 2

The SIL Role

…personal challenges

As in her first interview, SIL3 did mention in passing a few of the challenges she had faced in her role, but these didn't seem to be particularly obstructive to her, or bother her very much. For example, one of the challenges she faced was building relationships with the staff on the ward. I had assumed, because she had been working at her hospital as a staff nurse, that she was already familiar with the staff on her ward, but the ward that she was based at as a SIL was not the same ward she had worked on as a nurse, so she still needed to get to know the staff on her new ward.

Like SIL1, SIL3 started the implementation process being largely unfamiliar with the staff she would be working with, but unlike SIL1, this wasn't a source of anxiety for SIL3, she simply got involved with ward work and made her presence known -

"I didn't at first, because I didn't know any of them, but I just went on the ward and went right, I'll help you with washing."

This observation was also supported by PERFECTED field notes taken from SIL3's third action-planning meeting, where the PERFECTED researcher expresses their appreciation for SIL3's continued progress "to effect change and build relationships". Not only was SIL3 able to engage and motivate the staff on the ward, but her enthusiasm and focus also impacted the PERFECTED research team, as the researched described in their reflective notes that "she has made me 'believe' in PERFECTED again". This emphasised for me the critical importance of a change agent as the driving force behind implementing change.

…personal skills

It was this willingness to "get stuck in" that proved to be a key strategy in SIL3's ERP implementation process. SIL3 does not just explain to staff what the changes are that she's aiming to achieve, but she leads by example, demonstrating that they are not only possible but also effective and meaningful -

"…I think it helps that I go on the ward, and I physically check the lockers and put the shoes on and I stand the patients up and test them, rather than expecting them to do it. I physically go on and do it."

Even with her personal challenges which involved a lack of knowledge or understanding, SIL3 framed these as opportunities for personal growth and development –

"…continence care plan was a big one, and in the first cycle, even I didn't appreciate how important it was….But then once I went on the Falls & Fragility [training], they said if someone's got urgent incontinence and they can't express themselves and they just get up and they're higher risk of falls, right, that's really important to me actually."

SIL3 emphasised that it was this combination of specialist clinical understanding and people skills that were integral to being a successful SIL -

"You have to have a background knowledge of orthopaedics and dementia and delirium….then I think you need to get in contact with all the people that are related to that nice and early…"

Her clinical knowledge (context) gave SIL3 an informed insight into the relevance of the different pathway elements and how they might be achieved on her ward (mechanism), while her effective communication and people skills (context) enabled her to approach and liaise with appropriate stakeholders (mechanism). Both were invaluable in promoting successful ERP implementation (outcome).

Working With Others

…engaging with staff

Practical knowledge can be developed over time, as long as SILs are self-reflective and aware of the gaps in their understanding. Other members of staff can also be consulted for their expertise in certain areas. SIL3 emphasised that good working relationships with the appropriate stakeholders was her main priority, and cautioned that future SILs should focus on forging these relationships and engaging with staff in order to promote successful ERP implementation -

> *"…having contacts with the right people, that's the biggest thing. Making sure that the staff on the ward are engaged and interested and willing to change is really important, because if you don't involve them and…well they're not gonna listen are they?"*

This sentiment echoed some of the findings from my realist synthesis: that staff consultation was an integral part of implementation success. Introducing a new policy or intervention was not enough, and even if the new way of working is made mandatory, this is not a guarantee that staff will adhere to the protocol. SIL3 was aware of potential resistance to change (likely an insight from her experience working as a staff nurse), and worked proactively to overcome it. She explained the rationale behind the proposed changes, and worked directly with staff on the ward to engage them in the change process -

> *"…you've got to bear in mind that in a hospital, a lot of the time, they just throw stuff at you, say right, this is the paperwork, you have to do it, we say, that's it…instead of just telling people, I'll work with them, I'll explain why we're doing it, you know and show them the difference it makes…"*

This was supported by the field notes taken by the PERFECTED research team, which highlighted SIL3's action-planning meetings as "collaborative", where "people had time to discuss and develop ideas". SIL3's good rapport with staff meant that staff felt valued and supported, and the action-planning meetings (which she invited all staff to attend, regardless of background or staff group) provided them with an opportunity to engage in multidisciplinary discussions (context). This

facilitated staff motivation, enabling open discussion between staff of different backgrounds, and effective group problem solving (mechanisms), ultimately improving ERP implementation (outcome).

…team working

Having ward-based experience (context), SIL3 was sympathetic to the high demands and time pressures the ward staff were under, and that the changes she was asking them to make diverted their time and resources. As well as providing a rationale behind the changes, she also used more direct bargaining tactics -

> *"with certain people, I've had…If I do something for them, then they'll do a bit for me."*

By doing this, SIL3 could not only exchange favours thus motivating staff to engage with the change process, but she could also demonstrate that she was a "team player" who was willing to help out her colleagues where she was able to (mechanism). SIL3's level of embeddedness in her ward context acted as an important mediating factor in triggering generative mechanisms for ERP implementation. This is reflected in SIL3's own field notes, as her weekly reports to the PERFECTED research team describe how various relationships with different members of ward staff facilitated group problem solving (for example, her relationship with a "virtual ward nurse" with an interest in dementia providing "good ideas about getting community involvement", and ongoing consultation with ward manager, discharge matron and coordinators, in handing over discharge information appropriately).

Her relationship with her ward based colleagues was built around this attitude of team-working and mutual respect. SIL3 had strong views about the most important members of staff acting as gatekeepers to change. Unlike SIL1, who insisted that change came from the top and focused on engaging senior staff and managers, SIL3 saw the ward staff who worked directly with patients as keys to successful change -

> *"…just make sure that your shop floor staff are involved, it's so important. Because you can get the managers involved all you want, but it's them girls on the ward looking after them patients, and they're the most important thing."*

This "bottom up" approach that SIL3 adopted had been remarked upon several times by the PERFECTED research team, throughout the ERP implementation process, highlighting the valuable role it played in SIL3's efforts to implement change at her site.

A key team dynamic for SIL3 was her collaboration with the other two SILs. The SILs held regular group discussions (in person as well as over the telephone) to provide each other with support and

advice, but also to discuss their opinions of the pathway and what they felt needed changing. With issues that they all agreed on, they corroborated their thoughts and strategically planned how to approach the PERFECTED research team with their feedback -

"…so it was really talking to the other SILs and getting like their opinions and making sure that we all felt the same, and then collaborating what we thought together before we took it to the research team, about what we think's appropriate to add."

The SILs did not always agree on everything (for example their approaches to the implementation process, as mentioned above), but their disagreements were useful inasmuch as they helped to clarify SIL3's primary focus and motivation -

"…one of the girls said, you know, I'm not putting my name to that, which isn't the point but it's recognising that we can make it the best it can be…"

Rather than being preoccupied with the perceived shortcomings of the pathway, SIL3 adopted a solution-focused approach which prioritised optimising patient care –

"…knowing that those bits are in and those are important to us, not as outcome measures but as patient satisfaction, patient quality…"

SIL3 was not overly concerned with things that were not directly in her control. Unlike her SIL colleagues, SIL3 adopted a relaxed approach, accepting things which were out of her control, and working with the available resources to achieve the best possible outcomes for her site. This was also reflected in PERFECTED generated data, which noted that SIL3 consistently related her activities back to PERFECT-ER, and how she was aiming to achieve the goals within her role. I was also struck by the level of detail and consistently demonstrated in SIL3's weekly reports to the PERFECTED research team, when compared to those of the other two SILs. SIL3 did not simply provide brief reports of what she had achieved week to week, but gave thorough reflective reports about the impact of certain activites, how she might improve going forwards, and how she had been personally affected and developed throughout the process. I was struck by her level of commitment not only to the ERP implementation process and the role of SIL, but to the process of improving patient care as a whole.

The Change Process

…expectations and frustrations

Despite her positive attitude, SIL3 was not without her frustrations with the change process. She explained that certain elements of PERFECT-ER were simply impossible to implement at her hospital (most often due to resource issues or organisational structure), meaning that the pathway would never be fully implemented at her site. But even in the face of this frustration, SIL3 adopted a reflective attitude -

> *"There's certain points on [the ERP checklist] that aren't achievable specifically at my site…in my site the funding just isn't there. But I appreciate why it's in the checklist."*

Again, SIL3 demonstrated an awareness of the bigger picture, appreciating that although those elements were not achievable at her hospital, that was not necessarily the case for other hospitals. She appreciated the rationale and relevance of their inclusion on the pathway, even if she personally could not achieve them at her site.

As well as this, she briefly mentioned other frustrations with, for example the slow process of research (i.e. getting changes made to the pathway), and that when she first received the pathway document it was not what she expected. Despite these, she was overall very accepting of the parameters in which she was working.

SIL3 reflected on the earlier stages of the research process, and discussed how initially, the SIL role and responsibilities had been ambiguous. Similar to the other SILs' experiences, SIL3 had certain expectations of the SIL role, and found that it involved more responsibility than she had initially anticipated -

> *"I think at the start if we'd known that it were more about the process and sort of getting the checklist right…we were under the impression we were like the trial sites rather than the developing sites."*

…the bigger picture

SIL3 explained that there were certain elements of the pathway that she was unable to implement at the moment, but had laid the groundwork for their implementation in future. For example, she had intended to have delirium assessments included as part of standard admission paperwork, but at the time of the research period, her hospital was undergoing structural changes to change from paper notes over to electronic notes, and this change was not possible. However, she made sure that she

was involved in the discussions regarding the design of the new electronic system, so that she could influence the form it would take -

> *"…specifically at my site, we're going to electronic notes in October….they're building a new system, so I just went along to the talks to make sure like the delirium assessments are put in the admission pack…"*

SIL3 was not only concerned with the successful implementation of PERFECT-ER at her hospital, but expressed hope for the ongoing success of the pathway more generally. She was less concerned about "ticking all the boxes", but as in her first interview, expressed a genuine interest in the ongoing improvement of care for this group of patients -

> *"I just hope the other places accept it, and generally it's just about raising the awareness of how these people need to be cared for and like how important the quality of the care we give these patients are…we might not come away with all the points of the checklist, but I think the general ethos on the ward of how important it is…is really important. And if that gets across another ten hospitals, that'd be fantastic, wouldn't it?"*

Reflections on SIL3's second interview

As with her first interview, I continued to be impressed with SIL3's proactive way of working, creative approach and positive outlook. She had experienced many of the same frustrations and challenges that her fellow SILs described in their interviews, but her way of addressing these was markedly different. She had a predominantly optimistic outlook, and even when faced with challenges or barriers to implementing change, she was able to see these objectively and accept these as part of the process. This was demonstrated in her own research field notes and reflections, and described by PERFECTED researchers in their field notes and observations from action-planning meetings.

4.7.5.4 SIL3 Interview 3

As the PERFECTED WP2 research process was winding down at this point, there was less PERFECTED generated data available for me to use within my analysis, and this section of the narrative is predominantly informed by the SIL interview generated data.

The Change Process

…expectations and frustrations

In her previous interviews, SIL3 had mentioned in passing some of the challenges she had encountered during the research process, but most of these were not a serious cause of frustration

for her, as she was either able to overcome them, or came to terms with them and focused her energies elsewhere. One exception was the issue of organisational barriers, such as a lack of adequate resources and staff (discussed later in this section). These issues were more frustrating for SIL3, particularly when the administrative process slowed down her progress -

"…organisational barriers is a big one, because we're getting a hip fracture care strategy together…I'm trying to get that in place, but it's got to go through all this red tape, which is frustrating."

Despite her frustrations, SIL3 was able to reflect on the rationale behind the slow nature of the process. Although this didn't resolve the issue, it alleviated some of her frustration, as she was able to accept that certain processes took longer, but for good reason -

"…it does have to be checked by lots of people, doesn't it? Because anyone could write on a piece of paper and give it out otherwise couldn't they?"

Although she encountered several frustrations throughout the implementation process, SIL3 always managed to use her initiative to overcome them, or could come to accept these as an unavoidable part of the process. Where elements were outside of her control, she didn't allow these to bother her for long.

…the local context

Her reflective approach to the research process also allowed SIL3 to recognise that not everyone's experience of implementing the ERP would be the same as hers. She appreciated that structural and organisational differences would impact on what changes would be possible at different sites -

"I think it's important to realise the size of your hospital can really impact on what you can do in it."

Individual differences would also impact on a SIL's experiences of ERP implementation: certain things that SIL3 found challenging might be straightforward for future SILs, whose background and experience would vary -

"what I find difficult they might not find difficult."

Likewise, there were things that SIL3 found straightforward, due to her experience of working as a staff nurse, her approach and her existing relationships with staff at the hospital. Although certain challenges were straightforward for SIL3 to manage, she recognised that her fellow SILs did not always experience the same ease that she had, and the SILs in the next phase of PERFECTED might also face similar challenges. SIL3's discussions with me reflected what I had aimed to demonstrate

through the development of programme theories: that generative mechanisms to achieve desired outcomes could be triggered through a variety of distinct contexts.

….the bigger picture

Throughout the research process, SIL3 had shared some of the other SILs' reservations that the content of the ERP was not as she had initially hoped for or expected. However, unlike the other two SILs, she didn't dwell on this issue for long, accepted the pathway as it was, and was able to see beyond its perceived shortcomings, appreciating the wider, positive impact it was having at her hospital -

> *"…the checklist itself might not change practice, they might not be able to do everything on the checklist, but having staff aware and not having that dread when someone comes through the door, makes a massive difference…"*

Despite her previous expectations, SIL3's openness to change and growth-mindset allowed her to develop her understanding of the ERP and its rationale (context), enabling her to act as an effective staff coordinator regarding the ERP (mechanism), supporting staff in their understanding of the ERP and their roles within its implementation (outcome). SIL3 recognised that implementing the pathway was more than simply changing a few disparate ways of working, it signified a change in the culture of care, shifting the focus on a specific, vulnerable patient group -

> *"…we're definitely more aware. Whereas before, everything were a challenge, you know, oh no, not another dementia patient, how are we gonna manage? Now it's like, right, well let's get this done, and this done, and we'll see how we go. So they're much more positive and open to looking at the individual…"*

Having invested significant time and energy into the WP2 process, SIL3 considered what the future held for PERFECT-ER at her site. She was conscious that without the presence of a dedicated SIL driving the PERFECTED agenda, the changes that had been made during her time in post may not be maintained in the long-term -

> *"…looking at how we can maintain the things that we've put in place, for when we finish in September."*

She explained that it wasn't just about ensuring that current staff continued to follow the changes that had been implemented, but new staff members would also need training and guidance in these new ways of working -

"the thing is you do need someone there to remind people all the time, because you get such a big turnover of staff in the NHS…it's worrying cos you think well, who's gonna show them."

She then went on to explain to me that she had applied for a job on the ward, much as SIL2 had done, with the intention to surreptitiously push the PERFECTED agenda even after her role had officially concluded. She explained that the changes she had facilitated had made a positive difference to the ward, and she was eager to see that maintained -

"I've applied for a job, on the ward, to stay there! […] I think when you're passionate about something and you've done something like this for 12 months, you can see the difference so you want to maintain that don't you."

As with SIL2, I was concerned that SIL3 was assuming a lot of additional responsibility, on top of her full-time nursing duties, and while I admired her commitment to the project and to the care of her patients, I was sceptical about how sustainable this approach would be.

Working With Others

…engaging with staff

SIL3 described to me the presentation that she would be giving to the SILs employed for the next phase of the PERFECTED research programme. This included highlighting strategies she had employed to encourage ward staff to engage with the change process, and reiterating that the involvement of these staff had been integral to achieving change on her ward -

"I've got some parts on what are the top tips, like make sure you bribe the staff, making sure that, to me having those staff on the shop floor on your side it's just the most important thing."

As in her previous interviews, she explained that simply telling staff to change their behaviour was not enough. In order to encourage staff to change their current behaviour, it was important to involve them in the change process, so that they understood why the changes were being made -

"Who wants to change what they're doing just because [SIL3] from over there said so?"

She also engaged with and built upon the existing motivations of staff, highlighting what was important for them (providing the best possible care for patients, in a way that wasn't overly burdensome for the available staff), and explaining how implementing PERFECT-ER could help achieve this -

"…every nurse I've spoken to, they want to do what's best for their patients…when you want to learn better skills and how to cope better, and if it can make their working life easier, that's great."

As a staff nurse herself, SIL3 shared these motivations with the ward staff: it was one of the reasons she had initially wanted to be involved with the PERFECTED research programme. By sharing their motivations and aims, SIL3 had valuable insight in the best ways to approach the staff on the ward and engage then with the research process.

…team working

SIL3 put a strong emphasis on the importance of effective team working as a key facilitator to effecting change within her hospital. By involving as many staff members with the change process at every stage, she was able to encourage their engagement, thereby increasing their motivation and understanding -

"They're more open to, we can do different things…staff have a better understanding…"

By working with others, SIL3 was also able to foster her own motivation and further develop her own understanding -

"I share an office with a trauma coordinator…. She's still really keen and really positive. So I'll be looking at my checklist and I'll go "ooh what do you think about this" and we'll end up talking about it, so she keeps me going…"

She demonstrated a great awareness of her own gaps in understanding, and was grateful for the support and input she gained from others in achieving shared goals.

The SIL Role

…personal challenges

In her previous interviews, SIL3 had mentioned some of the challenges she had faced in her role, but none of these seemed to impede her for long, and she was able to manage them effectively. In this interview however, she spoke about staffing levels at her ward -

"…it's difficult because we've lost eight members of staff. Good members of staff. And that isn't because of PERFECTED or anything, that's just because we're short staffed all the time. The workload's heavy."

Being from a nursing background herself, SIL3 had insight into the everyday challenges that the ward staff had to face and the demands they were under. She likely had to work under similar

circumstances herself. When staffing levels were this low, ward duties took priority: it was not a case of staff not being motivated or engaged with PERFECTED, but they simply did not have time alongside their ward duties -

"It's not that they don't want to engage with it, and when they have time, they will…"

SIL3 spoke at length about the shortage of staff, signifying to me that this was an issue that she felt strongly about. She explained that staff shortages were always an issue, and that it wasn't just at her hospital, "it's everywhere", i.e. shortage of ward staff was a national issue. She empathised with her ward colleagues having to manage a heavy workload and long hours. She also explained that it was having a negative impact on the research process. This was an issue that had been discussed by all three SILs, and highlighted for me the impact organisational and structural barriers had on achieving successful ERP implementation. Despite prolonged and ongoing efforts to achieve ERP implementation, with all staff working collaboratively to manage practical barriers to change, certain elements had proved impossible to achieve, owing to barriers beyond their influence. At this stage, I decided that "organisational/structural barriers" merited inclusion in my staff consultation programme theory, as a mediating factor to achieving desired outcomes.

As SIL3 explained in previous interviews, she felt very strongly about involving as many staff members as possible in the implementation process, but due to the shortages, staff did not have the time to attend her action-planning meetings -

"…I can't have my meeting with everyone. I mean it's fine, because I'll go on the ward and I'll work with everyone and I'll talk to everyone as we're working, and that's fine…"

Once again, SIL3's sense of initiative and hands-on approach provides a straight-forward solution to a difficult situation. Ideally, SIL3 would have liked to have conducted these discussions in a meeting environment, so that different staff groups could discuss ideas and learn from each other. However, given the circumstances, this was not possible, so SIL3 adapted her approach to make the best of the situation –

"it's not the most ideal way…but you've got to work with what you've got."

SIL3 provided additional opportunities, outside of the action-planning meetings, for staff to be involved in discussions regarding ERP implementation (mechanism). This allowed for additional insights into managing implementation barriers that may not have otherwise have been possible

(outcome). This in turn promoted staff feelings of being valued and supported (context), promoting staff engagement with the consultation process, and encouraging effective communication (mechanism). These are added advantages that were not possible with the approaches adopted by SIL1 and SIL2.

SIL3 was aware that there were limits on what she could achieve, adopting this approach, but she explored as many options as possible, working with other members of staff, to maximise the reach of the PERFECTED ERP -

> *"I can only take it so far…you just have to keep pushing, without being too annoying."*

…personal skills

Throughout the research process, I had assumed that nothing negatively affected SIL3 and she had boundless enthusiasm for the project, so I was taken aback when she explained that there were times when she struggled to stay motivated. I was less surprised to find that she was able to self-manage this -

> *"…after a while you just think…why do I bother? Why do I bother, cos they're not bothered. But then you walk on the ward and you see stuff that you've done like you see your patients…they're happy and then you think yeah, do you know what, yeah I'm going to carry on."*

For SIL3, seeing the results of her work was enough to keep her motivated: it reminded her why she had become involved in this project in the first place, and that her efforts were having real effects on the experiences of her patients. By observing the positive effects of her efforts in practice, SIL3 was able to promote a positive sense of self-efficacy, which in turn facilitated her understanding (and belief in) the ERP and its rationale (context). As before, this helped her to work productively with staff, promoting their understanding further (mechanism) and promoting further implementation success (outcome).

Part of her role in these final stages in the project was to give a presentation of her experiences to the cohort of SILs employed for the next phase of PERFECTED. SIL3 described to me what she intended to discuss, which included highlighting some of the key skills she found important in enabling the implementation process. Unlike SIL2 who emphasised the importance of a specific background and understanding of working in a ward setting, SIL3 spoke more generally about person management skills -

"…negotiation skills. Good communication skills. Real empathy, to understand…"

Although a pre-existing knowledge of ward procedures could be useful in the role, SIL3's experiences demonstrated that any gaps in a SIL's understanding can be easily overcome by soliciting advice and expertise from other staff members. SIL3's level of ward embeddedness helped to promote good rapport with staff and effective person-management skills (context), enabling her to work effectively with staff, utilising their varied skills and experience (mechanism) to overcome implementation barriers and achieve implementation success (outcome).

Finally, SIL3 advised future SILs of the importance of accepting their limitations, that certain things would be outside of their control, and not everything would be possible. SIL3 avoided much unnecessary frustration and allowed her to focus her efforts and energy into making real and meaningful changes on her ward -

"Well you can't change everything though can you? So as long as they appreciate that, I think they'll be alright."

Reflections on SIL3's third interview

Throughout the twelve-month research process, SIL3 had presented herself as a calm, personable and creative professional. This was no different here at the end of the project, in the last month of her post as SIL. She demonstrated great initiative throughout the process, utilising a broad variety of resources in order to achieve her aims. Despite initial nervousness, she didn't hesitate to approach other staff members and solicit their expertise and guidance in achieving the aims of PERFECT-ER.

She expressed concern about the long-term sustainability of the pathway, explaining that an ongoing turnover of staff might see standard ward processes being re-adopted by default. She had experienced how involved she needed to be, as a change agent, to encourage the current cohort of staff to adapt their practice to reflect the aims of PERFECT-ER, and was worried that without a dedicated member of staff continuing in this role of "driving" the PEFECTED agenda, practice would revert to standard care. SIL3 explained to me that she had applied for a job on her PERFECTED ward, so that she could work there as a staff nurse once her SIL role had concluded. One of her motivations for doing so was to put herself in a position where she could keep driving the pathway agenda directly on the ward. Although I had concerns about her adopting this extra responsibility, and remained sceptical about how sustainable this would be, I admired her commitment to the process. I appreciated why, after twelve months of considerable effort, she had an intense desire to ensure that PERFECT-ER survived beyond her time in the SIL post.

4.7.6 Comparing the implementation process across all three sites

In this section, I will consolidate the narratives and themes from across the three hospital sites involved in the implementation of PERFECT-ER, highlighting key areas of similarity and divergence between the three sites. I will highlight key areas where the SILs' experiences supported the programme theories I developed in **Chapter 2**, and some of the key areas of divergence which prompted their further development. While I do give some initial interpretative commentary on these findings here, the main theoretical discussion is given in **Chapter 5**.

The SIL Role

At the start of the research process, there were three SILs from different backgrounds, with different personalities and levels of experience, based in different parts of the country in very different hospital contexts. There were some similarities: none of the SILs had ever been employed as a change agent before, they all had the same ERP to implement in their site, and they shared some of the same concerns and uncertainties.

One of the main uncertainties they faced was their initial understanding of the role, its responsibilities, and what was expected of them. This early uncertainty caused a degree of frustration in all of the SILs, a frustration which was directed primarily at the PERFECTED research team. The SILs were all hoping for clarity and structure, and were disappointed to find that when they commenced in their posts, PERFECT-ER was still under development. They expected their role would be to implement the pathway at their hospital, and collect data about pathway adherence, so were surprised to find that they were also going to be involved in the development of the pathway design. Without a clear understanding of their role, the process, and their responsibilities, the SILs were unsure how best to commence in post. As they were all eager to "hit the ground running", this lack of clarity prompted feelings of doubt and frustration. Robbins and Finley (2000) describe this as having an "unresolved role", as the SILs are unsure what their role is, or what is expected of them. This was particularly apparent with SIL1 at the start of the process, who wasn't sure how to proceed, or upon seeing problems and issues, wasn't comfortable providing feedback as she felt she was "over-stepping the mark". The uncertainty extends from the SILs to the staff they are working with, as without a clear definition of their own responsibilities, they struggled to identify their own authority and place within the ward team. In this instance, I hypothesised that the SILs' uncertainty impacted their sense of self-efficacy (the degree of confidence in their ability to fulfil their role), which mediated their understanding of the ERP and its rationale (context).

They dealt with this in different ways: SIL2, who presented herself as a very business-like deputy ward sister, spoke at length about her disappointment with this situation. However, she was able to

self-manage her own level of self-efficacy, identifying practical problems, but more often than not approached these with practical solutions. SIL3, who was more easy-going, had a more relaxed attitude to the circumstances, and accepted that these delays were outside of her control. She too was practical in her handling of the situation, finding other duties to occupy her time as productively as possible, and remained optimistic. Finally, SIL1, the only SIL who didn't come from a ward-based background (i.e. was not embedded in the ward context), voiced uncertainty throughout the research process, expressing concerns not only about the research process, but also about her ability to fulfil the duties expected of her. She focused on her lack of experience within the ward setting, often questioning if she was doing the right thing, if she was able to offer the same value and insight as the other two SILs. Her lack of embeddedness, coupled with her low sense of self-efficacy (context), inhibited her ability (at least at the start of the implementation process) to act as an effective coordinator for ERP implementation (mechanism), having negative implications for achieving implementation aims (outcome). Although all three SILs developed and settled into their roles throughout the research process, this initial reaction to the challenges they were presented with would set a precedent for the course of the next twelve months.

All three SILs described the role as being lonely and isolated, and although they worked with a wide range of different staff groups, their position was in many ways unique. They were each the only SIL operating within their hospital, and although they provided each other with support and advice, they were also different from each other. They were operating in distinctly different contexts, with different available resources, and came from different backgrounds. Their approach to implementing the necessary changes varied, and while they felt they had things to learn from each other, they didn't always agree on the most appropriate ways to influence staff behaviour. Each SIL appealed to their existing knowledge of their individual ward context, including existing procedures, staff relationships, and available resources, and this helped them to inform their approach to implementing change.

Once the implementation process began, their differences became more apparent, as each SIL described very different experiences in implementing the ERP at their own hospital site. Most notably different and isolated was SIL1, who had no experience of working on a ward, and therefore faced challenges that the other two SILs didn't. SIL2 and SIL3 commented on this in their own interviews, as they were aware that SIL1 did not have the same skillset as they did, and SIL2 in particular saw this lack of experience as a potential barrier to successful pathway implementation. SIL1 highlighted her lack of ward-based experience as being the primary issue in getting started, and described herself as being "very different" from the other two SILs. SIL2 and SIL3 agreed with this perception independently, and saw SIL1's background as being potentially problematic, as she was

unable to empathise with particular issues faced by ward staff. SIL2 experienced difficulties in delineating between her role as a SIL and her role as a ward sister, managing staff directly on the ward. I noticed this early on in the research process, when she stated she would use information gleaned in her observations as a SIL to implement desired changes as a ward sister. She also struggled with time management, as her role encompassed three separate wards. I saw SIL1 and SIL2 as representing two extremes of an "embeddedness continuum": SIL1 with minimal ward experience (affecting her knowledge of local practice and processes, and her rapport with staff), and SIL2 overly embedded (she had good knowledge of local context and excellent rapport with staff, but this may have created a conflict of interest, impacting her understanding of the ERP and its rationale). SIL3 struggled with some issues of confidence, particularly in approaching staff that she saw as "superior" to her as she viewed herself as "just a nurse" – however, she managed to overcome her misgivings and inserted herself into the consciousness of all members of staff involved in her ward with an attitude of optimism and persistence.

I had expected this feeling of isolation to lessen over the course of the research process, but even in their final interviews, all of the SILs still expressed how challenging it was to be in such a lonely role. Instead, their attitudes towards this changed, and they all came to accept it as part of the role. They were employed to coordinate the implementation process, and while they worked collaboratively with staff on the ward, they were not part of the ward team. They were still isolated, but they were more resilient and independent, and able to cope with the fact that they were not members of an established team. The fact that it took several months for the SILs to reach this level of acceptance and self-efficacy (particularly in SIL1's case) highlights the need for adequate support and supervision to help future SILs to manage these feelings of isolation.

Although all three of the SILs explained that being a SIL was unlike any role that they had ever held before, SIL1 struggled more with feeling separated from her colleagues than her fellow SILs. SIL1's feelings of isolation, exacerbated by feeling like the "odd one out" in the SIL group, affected her sense of self-efficacy (i.e. the extent to which she thought she was capable of fulfilling the role), and early on in the project, she felt as though she did not have as much to offer as the other two SILs. She questioned the value of her perspective and opinions, and at one point felt so overwhelmed that she considered resigning from her post. However, following some support from her workplace supervisor and guidance from one of the PERFECTED researchers, she gained some perspective and decided to continue with the project. The support she received reminded her of her original motivations for applying for the SIL role, and allowed her to see the value in the different perspective she brought to the project. This highlighted to me the importance of identifying appropriate methods of supporting change agent self-efficacy, as it was a critical mediating factor,

impacting contexts which triggered generative mechanisms. While SIL1 continued to express concerns about her ability throughout the research process, she did so in a more reflective and accepting way, as she was able to see the value in the different perspective that she brought. I couldn't help but wonder if this negative experience might have had an impact on the success of ERP implementation at her site, and if anything might have been done differently to avoid it. This incident did highlight the importance of SIL self-efficacy, and the valuable role played by supervisors and peers in providing support and advice.

Despite their different approaches to implementing PERFECT-ER, the SILs conceptualised their role in similar ways, describing themselves as drivers of change, project managers, facilitators, coordinators, and at one point "as someone steering the boat while they all paddle along behind". Although in the early stages of the process, SIL1 had assumed sole ownership of the success or failure of the pathway at her site, her view changed over the course of the project, with all three SILs eventually agreeing that their role was less concerned with achieving absolute adherence to all elements of the pathway, and more about enabling their wards to optimise care for a specific, vulnerable group of patients. I wondered if SIL1's earlier conceptualisation of her role had negatively affected her sense of self-efficacy, as she had assumed a heavier burden of personal responsibility than was perhaps warranted. As she began to accept that she did not have sole responsibility for the success or failure of the project, she became more relaxed about elements she was unable to implement, and was able to appreciate the wider impacts of the project as a whole.

This was a stark contrast to SIL2's experience, who presented herself at the start of the project as a confident professional, with a strong sense of self-efficacy. Within certain parameters (for example, working alongside staff that she was already familiar with, who had worked as part of her team in her role as a ward sister), her assessment of her own capability was demonstrably accurate. However, her over-reliance on pre-existing professional relationships meant that, in areas where she lacked knowledge or experience, she became frustrated and unsure how best to approach the problem. SIL3's experience of the role was the most stable over time, as she saw the project as a reflection of a multidisciplinary team working process from the very start of her appointment in the SIL role. She did express some reservations about her ability to fulfil her responsibilities, but demonstrated that she was capable of approaching expert others for support and guidance in achieving her aims. Although all three SILs were able to successfully implement a larger proportion of the elements specified on the PERFECTED pathway, they agreed that the research process had broader influences, such as bringing a more general awareness and understanding of supporting patients with dementia in acute hospital settings.

The Change Process

Although presented with the same ERP to implement, the SILs all approached the process in distinctly different ways. This again emphasised that importance of developing effective programme theories for ERP implementation, as they demonstrated how desired outcomes can be achieved in different contexts, through the triggering of critical generative mechanisms. SIL1's approach was the most "top-down" method of the three: she mainly implemented change on her ward by appealing to higher authorities such as the dementia team and higher ward management, as well as consulting with her site PI (a consultant surgeon with whom she had an existing professional relationship). She explicitly stated that although getting ward staff on board with the change process was desirable, she saw senior management as the most important stakeholders, and focused her efforts on getting their buy-in. SIL2 often relied heavily on her own, pre-existing authority to affect change: as she was already a ward sister on one of the wards she was involved with, she was already known and respected by staff there, and relied on that standing to influence staff. This approach was not always sufficient however, and she sometimes struggled with change resistance from certain staff groups. SIL3 did approach higher managers where necessary, but insisted that the most important strategy was to influence ward staff directly. She did this via a very hands-on, "bottom-up" approach, working alongside staff in their duties (e.g. dressing patients, making beds, etc.) whilst discussing elements of the checklist directly with them and eliciting their own opinions. SIL3 was conscious of her lack of pre-existing relationships with staff at her site, and made proactive efforts to broaden her network of relationships. This enabled her to engage directly with staff and create an awareness of the PERFECTED project and her role within it. SIL3's creative approaches to engaging a broad range of ward staff identified an interrelatedness between staff feeling valued and respected (context) and their ability to communication effectively, and participate in open discussions about the ERP implementation process (mechanisms). These insights were not possible through realist synthesis of previous literature alone, as previous ERP implementation literature lacked this level of granular, contextual detail regarding staff consultation processes.

Although the SILs' approaches were different, they had similar levels of success in implementing the ERP at their hospitals, demonstrating that the specific approach to ERP implementation was not the key factor to success. The SILs utilised their existing skills, experience and professional relationships to achieve a similar goal, constructing implementation strategies that were most suited to them and their individual context.

The SILs were able to identify their own strengths and weaknesses, as well as those in their fellow SILs, and utilise these to best effect. Throughout their interviews with me, they each reflected on issues that they had encountered, and how they had developed new skills in order to overcome

these. For example, SIL1 spoke at length about her lack of experience working on a ward, but made efforts to be a visible presence on the ward, get to know her ward colleagues, and spoke to the other two SILs to gain an insight into ward culture.

Despite their different backgrounds and different approaches to coordinating the implementation process, there were lots of areas of overlap in the SILs experiences, with similar facilitators and barriers to implementation (for example, the intrinsic motivation of staff versus obstructive organisational procedures). As the project progressed, they also met and discussed their experiences with each other with increasing frequency. This served not only as a problem solving and confidence building experience, but also allowed them to corroborate their interpretation of certain ambiguous elements on the ERP checklist.

The main issue all three SILs encountered was a lack of sufficient resources, for example none of the sites were able to implement the recommended 7-day rehabilitation provision, simply because the staff and money were not available. That a lack of sufficient resources posed a significant barrier to implementing change didn't come as a surprise to me, but I was interested in how the three SILs managed this particular frustration. SIL1 explained that issues of resources and other organisational barriers was an ongoing source of stress for her, as she felt that she was being asked to implement changes that were impossible. Particularly at the front-end of the process, she expended a lot of time and energy exploring ways to address issues that she later accepted were never going to be solved on her ward. She put the onus of blame on the research team for this, stating that researchers didn't have a realistic picture of what was achievable in practice, and the inclusion of elements that were "unachievable" was needlessly frustrating. This view was shared by SIL2, who stated she didn't understand why certain elements had been included in the ERP design; elements of the pathway which she couldn't implement were frustrating to her, and she did question their relevance, but she didn't expend excessive effort on pursuing changes that she had deemed unachievable. In contrast to this, SIL3 also explained that certain elements of the pathway were not achievable at her ward, but she could understand why they had been included on the pathway document. She accepted that, given the resources available at her particular site, not everything on the pathway would be possible in her local context, but might be achievable at other sites; even if her site was unable to enact those changes it didn't mean they shouldn't be included on the pathway.

All three SILs agreed that good communication, within and between teams, was key to implementation success. Although the role of SIL was central to the coordination of the implementation process, the SILs had to work collaboratively with a broad range of staff groups in

order to realise the changes necessary for ERP implementation. Hence, effective team working, person management and communication skills were key skills for an effective SIL.

Working With Others

In order to fulfil their responsibilities, both as change agents and as co-researchers working with the PERFECTED research team, the SILs had to work collaboratively with a broad range of professionals. This meant that the SILs had to communicate effectively with staff members from different disciplines, as well as the diverse research team at the UEA. Each staff group had different areas of expertise and differing priorities and motivations, resulting in a complex network of interdisciplinary relationships for the SILs to manage. In navigating this complex network of relationships, the SILs identified a number of different "teams" that they worked within, each with its own purpose and function. All three of the SILs agreed that working collaboratively with other members of staff was integral to meaningful progress and change.

Central to their team working process was the peer support group that the SILs formed between themselves. At the start of the project, they only spoke to each other when they met at the UEA and via scheduled teleconferences with the PERFECTED research team. However, following some brief email exchanges and encouragement from PERFECTED researchers, they increased the frequency of their group discussions over phone, and visited each other at their hospital sites for mutual support and sharing of ideas. Although they didn't always agree on their central aims and the best ways to achieve them, they did offer each other alternative perspectives and different insights into shared issues. They helped each other to navigate the process of implementation, clarify elements of the pathway that they found ambiguous, and offer mutual reassurance and affirmation. This peer support not only helped the SILs to develop a greater sense of self-efficacy, but also gave them a collective confidence to provide honest and focussed feedback to the PERFECTED research team.

The relationship between the SILs and the PERFECTED research team was perhaps the most challenging. Although they were primarily employed as co-researchers by the PERFECTED research project, their clinical background coloured their expectations of the implementation process. They were all used to a much faster-paced way of working, and all three SILs expressed frustration at the slow process of research. This initially began with their frustration at a lack of structure and clarity at the start of the research period (as mentioned above), but subsequent issues with development and feedback further exacerbated this. All three SILs spoke about their relationship with the research team in terms of "them vs. us", essentially separating the SIL group from the wider research team. Although they explicitly made a point of explaining to me that they realised that the research team had put great time and effort into the ERP design process, and they did not mean to make any

personal criticisms of any of the researchers, there were many occasions when they disagreed with decisions made by the research team. They explained that they felt the research team was “out of touch” with clinical practice, often asking for changes to be made that were not practical or possible in reality. SIL1 talked at length about her frustrations, but it was mainly problem-focussed. SIL2 saw the same conceptual chasm between “the reality and the ideal”, but resolved this to a certain extend by focussing on her own aims. Finally, SIL3 accepted that there were issues, but did what she could to fulfil the ERP checklist as much as possible. I found these discussions in interview to be both interesting and personally challenging, not only as a researcher myself, but also because I was working alongside the PERFECTED research team, which included members of my own supervisory team.

The SILs all approached working collaboratively with staff on their wards in different ways, and this paralleled their overall approach to the change process as a whole. All three SILs recognised that engaging with staff and working effectively within a multidisciplinary team was vitally important to affecting the necessary changes at their sites. However, while SIL3 went to great lengths to ensure that as many staff members from as many staff groups had an input to the process of change as possible, SIL1 and SIL2 were more selective in who they discussed the process of change with. Neither approach guaranteed a fully successful ERP implementation, and all three SILs encountered challenges during the process.

Chapter 5 - Discussion – drawing together findings from across the process

Although the introduction of ERPs has demonstrated an improvement in patient experience of surgery and a reduction in length of hospital stay (Varadhan, Lobo and Ljungqvist, 2010; Aluri and Wrench, 2014; Harrison *et al.*, 2014), their implementation can be slow and frustrating for those staff involved (Lyon, Solomon and Harrison, 2014; Pearsall *et al.*, 2015). As is often the case with the development and introduction of new hospital procedures (particularly those which involve a broad range of staff groups), appropriate uptake and adherence to the pathway remains challenging (Hawe *et al.*, 2004). This was true of the sites involved in PERFECTED WP2, with all three SILs reporting some issues of non-adherence at all stages of the research process.

The successful implementation of a new ERP requires all stakeholders to work effectively and collaboratively towards a shared goal. One commonly used strategy to promote this, identified through my realist synthesis in **Chapter 2**, is to consult with relevant stakeholders throughout the design and implementation of the ERP. What counts as a "relevant stakeholder" is less apparent, but using realist synthesis I identified a number of CMO configurations related to stakeholder consultation, and subsequently developed these into a working programme theory. Most of the papers included in my review utilised some form of stakeholder consultation (most often in the form of a multidisciplinary working group) to aid the ERP implementation process. Despite this, efforts were still met with some areas of low or non-adherence, particularly in relation to post-operative pathway elements. A lack of detailed contextual information in the available literature made it challenging to explore the specific reasons for these areas of low adherence. This highlighted areas for further investigation and development in my empirical study. As stakeholder consultation was embedded in the PERFECTED WP2 research process (in the form of regular action-planning meetings, arranged by the SILs), this facilitated my exploration of how this strategy was utilised in three distinct contexts.

Another common implementation strategy, identified through my review, is the employment of a change agent to coordinate the ERP implementation process. However, this showed that even when a change agent is used, newly introduced ERPs rarely achieve full adherence by staff (Gustafsson *et al.*, 2011; Cakir *et al.*, 2013). In the context of the empirical study, a SIL was employed both as a change agent, and as a co-researcher for PERFECTED WP2. By exploring their experiences of the role across the twelve-month implementation period, I was able to gain a rich insight into the specific challenges they faced, and how they managed these, to achieve maximal ERP implementation. This

allowed me to gain a greater understanding of the change agent role in a real-life setting, highlighting skills and strategies they used to fulfil their role and responsibilities.

In this chapter, I will discuss the findings from my empirical study and examine how local and individual differences between different implementation sites impacts on the process and outcomes of the introduction of a new ERP. I will revisit my initial research questions and discuss how my study has addressed these. This will form the foundation for specific recommendations for policymakers and clinicians designing future ERPs. Drawing on relevant theory, I will explore how the findings from my empirical study contribute to the current understanding of ERP implementation, integrating these with the findings from my realist synthesis, to further develop ERP implementation programme theories. I will discuss the role of implementation research, creating readiness for change, how change agents manage barriers, defining the role and its key responsibilities, and consider how best these roles can be fulfilled. In each of these sub-sections, I discuss my findings in relation to existing theory and explore how this contributes to the ongoing development of the programme theories from **Chapter 2**.

5.1 Addressing the research questions

1. What are the main barriers and facilitators to ERP implementation?

The SILs unanimously stated the most significant barriers they encountered were concerned with a lack of sufficient opportunity, i.e. a lack of available resources (including staffing), and pre-existing structural and organisational barriers. These meant that despite staff having the skills and motivation to change their behaviour, certain elements of the checklist were not possible to implement. These barriers are common in many efforts to implement new healthcare interventions (Newman, Papadopoulos and Sigsworth, 1998). Other barriers included a lack of appropriate capability, in both change agents and ward staff. Where change agents lacked capability (e.g. not knowing where to find appropriate documentation) this was easily addressed through consultation, i.e. consulting with staff to address gaps in their understanding. Where ward staff lacked capability (e.g. lacking a full understanding of the pathway and its rationale), the change agents again consulted with staff to identify what training or explanations were needed to improve capability, thereby improving pathway adherence. However, as the SILs in this study held some fundamental misunderstandings about the pathway (believing it was not sufficiently evidence-based), this may have limited the extent to which the ERP was successfully implemented.

A lack of motivation did not pose a significant barrier within the scope of this research. There were some rare instances of staff not being motivated to change, and some documentation was not completed because it was deemed too time consuming. However, the SILs were able to address this

by ensuring documentation became part of admission packs, making the completion of this task less of a concerted effort and more or less habitual. Staff motivation to change was on the whole one of the main facilitators to successful implementation. The majority of staff at all three sites were concerned with improving patient care and keen to work collaboratively to achieve best practice at their hospitals. Consequently, open communication and effective multidisciplinary team working were also key facilitators to implementation success.

2. How do change agents promote pathway adherence by staff?

As outlined in the programme theories developed in **Chapter 2**, change agents promoted pathway adherence predominantly through engaging staff in the ERP implementation process. This was in part achieved through staff consultation in formal action-planning meetings (which served not only as an opportunity to motivate staff, but also to act as a forum for collaborative problem solving), and by actively engaging with staff in the ward environment.

None of the change agents involved in my empirical study demonstrated the use of any formal implementation strategies. Implementation approach was guided partly by the research process as prescribed by the PERFECTED research team (repeated cycles of ward audit followed by action-planning meetings/optimising care sessions), but were otherwise guided by the SILs own preferred approach or intuition. It seemed to me that each SIL chose a preferred approach to ERP implementation that they were most comfortable with, or that fitted with their existing skill-set and experience. SIL1 had no experience of ward working, therefore often deferred to higher authorities to get the changes implemented (i.e. working with managers, peripheral teams etc.). This extended to her optimising care sessions, where she demonstrated a preference for inviting a select few people who she felt “represented the ward”. SIL2 was already a deputy ward sister and held her own authority over some of the ward staff; they respected her and readily did as she asked them to. SIL3 had extensive experience working as a staff nurse on the ward, and also demonstrated herself to be a “people person”, instigating change from the “ground up” by working alongside ward staff and discussing the pathway directly with them. She highlighted from experience why these changes were important, eliciting their opinions and uncovering potential barriers or resistance to change. All three SILs were able to enact a certain level of change this way, but it is worth speculating whether a more formal or strategised approach to implementation may have been more successful, and less demanding on the change agents and the staff that they coordinated.

3. What are the key skills necessary to fulfil the role of a change agent?

Consolidating the findings from both my realist review and empirical study, key attributes of an effective change agent include good people management and leadership skills, in order to collaborate effectively with staff from a broad range of disciplines and achieve shared goals. Although good, existing professional relationships with ward staff may be beneficial, this is not always necessary, and in some cases may present a barrier to implementation. In the case of SIL2, as the ward staff already knew her and respected her authority, they appeared to be more willing to let her lead the decision making process, rather than participate in productive and creative group problem solving. A change agent with an open-minded approach and good initiative should be able to establish a good rapport with staff which in turn promotes multidisciplinary working. This ability to use initiative and solicit relevant advice and expertise from appropriate members of staff is potentially far more valuable than specific pre-existing knowledge or expertise with regards to ward practice, as the change agent acts to coordinate group efforts for pathway implementation, rather than dictate specific tasks, to bring about desired outcomes.

The majority of existing ERP implementation research exemplifies the use of nursing staff as coordinating change agents, and given the skills and experience of this staff group, it is clear why they may be ideally placed to fulfil the responsibilities of the role. Ward nurses, recruited internally, have an understanding of current practice and local context (including potential barriers to change), demonstrate collaborative team working, and most likely possess existing professional relationships with current ward staff. However, despite these many benefits, my research demonstrates some potential barriers when recruiting change agents solely from a nursing cohort. These include the prioritisation of predominantly nursing-related concerns, potential pre-existing biases towards or against certain staff groups, or a conflict of interest, e.g. a long-standing member of staff may believe they know “what is best for their ward”, which may be contrary to the proposed ERP. Although recruiting change agents from a non-nursing background does not guarantee immunity to these barriers, I propose that the key attributes for an effective change agent can be met by staff from disciplines other than nursing, and recruitment should not be restricted by professional background.

4. How do change agents negotiate the complex network of multidisciplinary staff relationships in order to achieve implementation success?

All three SILs involved in my empirical study used formal action-planning meetings as the main forum for collaborative, multidisciplinary discussion. Although these meetings were established as part of the PERFECTED WP2 action research process, they also acted as an opportunity for the SILs to consult with ward staff, promoting group problem solving and engaging them in the implementation

process. However, as attendance to these meetings was not mandatory (and in the cases of SIL1 and SIL2, not open to any and all ward staff), it is likely that staff attending these meetings were already engaged in the process and highly motivated to change. To encourage wider participation in the ERP implementation process, the SILs used a number of different strategies. For example, SIL3 worked directly on the ward, alongside healthcare assistants and nursing staff, who she had identified as less likely to engage in multidisciplinary group discussions, in order to solicit their opinions on the implementation process, and promote motivation to change. SIL1 and SIL2 identified a small number of "champions", who worked closely with them to engage with staff and continue promoting the ERP with staff on the ward. All SILs capitalised on the desire of staff to provide the best possible care for their patients, and ensured that staff felt respected and valued.

5.2 Selecting appropriate implementation strategies

A key stage in introducing a new healthcare intervention is selecting or designing an appropriate implementation strategy, to ensure a smooth transition from existing processes, and encourage staff adherence to the new way of working. This is particularly true of a multimodal intervention such as an ERP, which affects a number of different ward processes and the multidisciplinary staff teams involved in them. Designing an implementation strategy for the introduction of a new ERP should take into account the local context, the desired outcomes, and the resources available. My realist synthesis of previous ERP implementation literature identified the appointment of a central change agent and the consultation of stakeholders as the two main strategies used to ensure successful implementation of a new pathway. However, limited detail was available regarding why these strategies were adopted, how and to what extent they were effective, or under what circumstances they worked or not. A lack of detailed reporting is a common criticism in implementation literature (Proctor, Powell and McMillen, 2013; Powell *et al.*, 2017), making appraisal and selection of appropriate strategies challenging. As suggested by McCormack et al (2013), I noted an emphasis on evidence-informed healthcare, but only passing reference to the use of evidence-informed implementation design.

It is clear that successful implementation of a new intervention requires some forethought regarding implementation strategy, particularly in the case of a complex intervention such as an ERP (Maessen *et al.*, 2007; Bjurling-Sjöberg, 2018). However, identifying the most appropriate strategy to suit local context, circumstances and available resources is more challenging. According to realist evaluation theory, it is not the regularity in implementation approaches that results in outcome regularity, but underlying generative mechanisms (Pawson and Tilley, 2004). That is to say, to achieve similar outcomes in two distinctly different contexts, clinicians and policymakers may need to adopt different approaches. Simply appointing a coordinating change agent and arranging multidisciplinary

staff consultation meetings is not enough to ensure implementation success. Various factors must also be taken into account, such as the physical environment and available resources (are the required changes practically possible in this context?), the attitudes and motivation of staff (are staff ready, or resistant, to change?). The current practices in place (how drastic a change will be required to achieve implementation success?), and the experience, background, attitude and motivation of the appointed change agent (given the local context and circumstances, is the person in role the right person for the job?) must also be considered. This is by no means an exhaustive list of factors that may impact on the implementation of an intervention such as an ERP, but these were some of the critical factors emerging throughout my research in the three sites involved with PERFECTED WP2.

My realist synthesis identified two main implementation strategies used in the introduction of an ERP, both of which were also used in the PERFECT-ER implementation process. The appointment of a dedicated change agent was realised through the employment of a SIL at each of the partner hospitals. As well as coordinating and communicating within and between staff groups affected by the introduction of the ERP, the SILs also collected research data for PERFECTED. One of their researcher responsibilities was to conduct ward audits (assessing ERP adherence), and then to arrange multidisciplinary "action-planning meetings", in which areas of low adherence would be discussed and potential solutions agreed upon. These meetings constituted part of "staff consultation", which was the second implementation strategy identified in my realist synthesis. In both cases, these implementation strategies were prescribed by the action research process. However, how the SILs approached their role and the action-planning meetings was largely left up to the individual. The SILs attended an induction day at the UEA, and received regular supervision and guidance from the PERFECTED research team, which clarified their duties as co-researchers (i.e. clear direction on how to complete audit checklists, how to conduct ward observations, and how to write reflective field notes). The PERFECTED research team did not choose how the SILs brought about change at their hospitals.

In my empirical study, I explored the implementation process in detail, including the SILs' individual approaches to affecting change within their wards. By working directly with the SILs coordinating the implementation process, I gained insight into why they selected particular approaches to implementing the ERP, exploring to what extent this rationale was based on sensitivity to local context, personal preference, or dictated by resource and structural restrictions. Although all three SILs came to the project with a broad and varied range of skills and experience, they were all from nursing backgrounds, and therefore nursing care was their main area of expertise and primary concern. As a psychologist with an interest in behaviour change, I noticed that at no stage did any

one of the SILs mention behaviour change strategies. Considering the size of the project and the broad range of staff involved, I had thought that a strategic plan of implementing the necessary changes would have been a high priority for those tasked with coordinating the pathway. I found this particularly interesting considering SIL2's complaint that the PERFECT-ER pathway was based on expert consultation, and not research evidence, and as such she found it challenging to "sell it" to staff, who prioritised evidence-based healthcare. The SILs' apparent concern with "evidence-based healthcare" did not extend to "evidence-based implementation". This is a known issue in intervention implementation research, with McCormack et al (2013) noting that "practitioners and policymakers have largely afforded only secondary importance to the use of evidence reviews in the implementation of healthcare interventions". Although the interventions themselves are designed in consultation with current literature, field experts and so forth (as was the case for PERFECT-ER), implementation strategy is rarely given this level of thorough consideration.

The SILs (and the hospital staff) stated explicitly that they were concerned that their professional practice needed some supporting research evidence. The SILs' repeated reference to "evidence-based practice" was particularly interesting, as it denoted a significant barrier to implementation success. Although the SILs all mentioned "evidence-based practice", they did not explain or define what they meant by this term, only stating that PERFECT-ER was "not evidence-based". Examining the PERFECT-ER design process, I disagree with the SILs' view: PERFECT-ER was designed through a rigorous and broad-reaching evidence consolidation process, taking into account current best practice, a systematic review of relevant literature (Smith *et al.*, 2015), NICE guidelines (NICE, 2006, 2011, 2012), and PPI and field expert consultation. Either the SILs held a narrow definition of the term "evidence-based practice", or a fundamental misunderstanding of how PERFECT-ER was designed, or some combination of the two. The promotion of evidence-based practice is a high priority in UK healthcare, but a sub-section of healthcare staff presume that "evidence" refers only to randomised controlled trials and meta-analyses (Sackett *et al.*, 1996). This belief (which I propose was held by the SILs), not only discounts other important sources of evidence (including those employed in the design of PERFECT-ER), but also implies pragmatic decision-making is impossible in areas of healthcare which are underrepresented in this way in the literature (e.g. the use of ERPs specifically for patients with dementia). Referring back to one of the programme theories I developed in my realist synthesis, the SILs' insistence that PERFECT-ER was not "evidence-based" suggested that they did not fully understand the rationale or evidence base behind the ERP (context). As a result, their ability to act confidently as coordinators for the ERP's implementation was impaired, and they were not always able to identify or respond to issues or questions posed by

ward staff (mechanism). This impacted the ward staff's understanding of the ERP and its rationale, and their understanding of their roles in implementing it (outcome).

There is then the question of how healthcare staff (including the SILs) appraise the evidence base supporting proposed new ways of working. In the case of the SILs and PERFECT-ER, I suspect little "fact checking" took place. They all stated that they believed PERFECT-ER was not evidence-based, but did not explain what they meant about this, explain what they understood by the term "evidence-based practice", or discuss how they usually ensured that their practice was informed by evidence (Shaughnessy and Slawson, 2004). I speculate that the SILs relied on the use of the term "evidence-based practice" as a socially acceptable rhetorical device to resist enacting changes that they individually perceived as not important, possible, or desirable. This was supported by the manner in which the SILs discussed the pathway in group teleconferences with the PERFECTED research team. When asked how they appraised elements of PERFECT-ER, the SILs stated that they used their "professional knowledge", and what they observed on the ward. Despite evidence-based practice being widely supported in healthcare discourse (Youngblut and Brooten, 2001; Frewin, 2005), there is a growing concern that more familiar, traditional practices persist, contradictory to the prevailing evidence base (Newman, Papadopoulos and Sigsworth, 1998; Melnyk, 2016). Exactly why these more familiar practices persist is unclear, but my research, alongside existing academic literature, suggest some possible explanations.

Although I would not expect every individual member of staff to independently conduct a thorough appraisal of all emerging evidence, some level of critical engagement with evidence base can be valuable. The use of NICE guidelines and evidence-informed interventions and policies (including PERFECT-ER) represent a consolidation of research evidence and current best practice, designed and adapted in such a way to guide and inform continually improving healthcare practice. As the SILs expressed concerns regarding the evidence base from which PERFECT-ER was designed, they had the opportunity to query these concerns with the PERFECTED research team, or explore the supporting evidence base. Instead, they (and by extension, the staff they worked collaboratively with) chose to persist with the rhetoric that PERFECTED lacked sufficient evidence base. This was used as a rationale for why they chose not to enact some of the changes suggested by PERFECT-ER. SIL3 was the exception: she worked creatively with the pathway, finding related evidence to pathway elements to convince staff of its worth and relevance. Working proactively, she found supporting evidence (including existing policies, clinical guidelines, and published literature) and practically demonstrated, directly on the ward, the usefulness of PERFECT-ER in practice, to motivate and engage staff in the implementation process. SIL3's strategy demonstrated not only her use of initiative, but also her broader view of what is meant by "evidence-based practice".

Relating this to the selection of appropriate implementation strategies, this concern with evidence-based practice was inconsistent, as it did not extend to how the SILs approached the process of implementation. As an outsider to the project, it appeared to me that they did not consider evidence-based implementation strategies. Instead, they relied on the structure of the research project and their own intuition to provide reasonable strategies for implementation. SIL1 predominantly used the action-planning meetings to delegate the change process to senior staff members, SIL2 utilised her existing position of authority as a ward sister to encourage uptake and adherence by staff, and SIL3 often worked on the ward (similar to her previous role as a staff nurse) alongside ward staff to discuss the change process directly with them. Mostly, the SILs' management of implementation barriers was more reactive than proactive, and largely relied on existing professional relationships and nursing experience to illicit the changes they wanted to see. Although all three SILs achieved a degree of success in implementing PERFECT-ER in their hospitals, a more carefully planned, strategic approach to implementation may have been more successful, in both short- and longer-term, been more economical in terms of time and resources, and could have been less stressful for the SILs themselves (Kelly and Barker, 2016). A strategic plan, developed prior to the initial introduction of the ERP would have helped the SILs to prioritise the necessary changes, minimising unnecessary delays and frustrations (Baker *et al.*, 2010). The impact of these frustrations affected all of the SILs to a certain extent, but none more so than SIL1, who explained that she felt she had wasted a lot of her time and energy trying to implement changes that were not possible at her site. This had clear ramifications for her, as she framed these as personal failures, and this negatively affected her sense of self-efficacy and her motivation to continue with the project.

One way that the SILs may have avoided this would be to categorise the types of changes required in order to implement individual ERP elements. For example, completion of assessment tools requires that these tools are accessible (documentation) and that staff use them (individual or group level change), whereas the involvement of carers in multidisciplinary meetings, or the provision of 7-day rehabilitation may require significant structural or organisational changes (resources, staff, and environment). By identifying at an early stage the types of changes that are required, a change agent can prioritise these effectively, selecting appropriate implementation strategies or behaviour change techniques, and use their time and resources more effectively (Lugtenberg *et al.*, 2009). Without an assessment of the types of changes required, there is a risk that the change agent will not approach the problem in the most effective way, and this causes frustration and delay. By assessing the type of changes required, change agents can pre-emptively highlight potential barriers, and strategically plan their implementation strategy to address these, and improve pathway adherence in practice.

From the interview data, the SILs identified the main issues with implementing the ERP as structural barriers and lack of appropriate resources. These specific issues could be categorised as issues of insufficient opportunity, as they relate to factors outside the control of the individuals enacting the behaviour change. Addressing barriers related to opportunity was particularly challenging for SILs as they had little influence over their physical environment or the resources available to them. This does not mean that they had no influence over these issues, but that the changes cannot be approached in the same way as issues of capability or motivation. Addressing issues of opportunity, for example changing a key policy document, follows a strict procedure, and realising change can often take time. Making changes to the physical or procedural barriers to opportunity required a wholly different approach than simply encouraging or incentivising staff to change their behaviour. Attempting to address issues of opportunity was a source of frustration for all three SILs, and impacted their motivation and capability in terms of their self-efficacy (which can be viewed as their self-assessment of their own capability (Gist, 1987)). Issues relating to the SILs own motivation and capability will be discussed further in section **5.6**.

A lack of sufficient staff motivation did not appear to present as a significant barrier to ERP implementation, as all three SILs reported that their action-planning meetings were well attended and staff were engaged with the project and discussions. However, it is important to consider that the absence of unmotivated staff at these meetings does not necessarily imply that all staff members were motivated to change their behaviour. Firstly, staff members may have felt under pressure to engage with the process and "be seen" to be complying with the process, even if they did not agree with the new way of working or intend to enact the changes. Secondly, as staff were not obligated to consent to the study or attend the action-planning meetings, those who were not motivated to change had the opportunity to opt out, and simply not be represented in the process. Those who were motivated would be at the meetings, those who were not motivated would not. If there were staff unmotivated to change their behaviour, it was challenging for the SILs to identify these individuals, and therefore hard to address the issue of motivation. In order for the SILs to ensure staff were sufficiently motivated to change, they had to consider broader strategies involving all affected stakeholders in the implementation process, not just those who opted to attend action-planning meetings. In this regard, SIL1's approach, which focussed predominantly on utilising action-planning meetings as a behaviour change strategy, put her at a disadvantage.

Where individuals' capability presented barriers to behaviour change, these were relatively easy to identify and address. There were very few issues of capability identified in any of the SILs narratives, as the ERP did not require any particularly demanding changes in procedure. The only obvious exception was in cases where staff did not understand the rationale for a certain change, and this

lack of understanding had subsequently affected motivation to enact the changes. In these cases, the SILs were able to either present supporting evidence for the desired change, or demonstrate directly in practice the positive impact the changes could have on patients' wellbeing. Seeing first-hand the outcomes of the change helped staff to understand why the ERP was introduced, and subsequently increased their motivation to change. Appealing to credible sources also gave staff confidence that what they were being asked to do was supporting by research and evidence. This is worth bearing in mind when considering the SILs' approaches to selecting their implementation strategies.

Overall, the SILs' chosen implementation strategies were selected without consulting theory, but instead relied on their intuition and preferred ways of working. When their chosen approaches to change failed, the SILs became frustrated and demotivated, as demonstrated by SIL1 who considering resigning from her post. Using an evidence-based approach to implementation may have helped SILs feel more confident in their approach, and may have avoided unnecessary frustration and time wasting. A theoretically based implementation strategy would also have given the SILs a variety of ways of working. If one approach was not successful, they could explore the available alternatives. All three SILs found the implementation process stressful, as they encountered barriers to implementation, and some issues which they thought were insoluble. An understanding of behaviour change theory may have helped them feel more secure, particularly as they frequently appealed to their philosophy of "evidence-based practice". Formulating a strategic plan of implementation prior to commencing the process may have helped them feel more secure in their decision-making, as strategies developed by reference to a credible source (i.e. behaviour change strategies supported by current research) would provide rationale and direction to the process. It may have also helped SILs to identify early on which aspects of the pathway would be more challenging or even impossible to implement, thereby allowing them to prioritise the proposed changes. By the end of the research period, the SILs were able to retrospectively identify which changes were not possible to implement at their sites; an earlier understanding of the elements of behaviour change may have helped them identify these barriers in advance, and avoided effort spent on "dead-end" ventures. This is discussed further in section **5.4**.

The SILs used a variety of approaches to engage ward staff in the implementation process. These were either built into the responsibilities of their role (e.g. running action-planning meetings with staff) or selected using personal preference or intuition (e.g. SIL3 working alongside staff on the ward to role-model desired behaviours). Analysing the data, I identified twelve distinct and specific strategies employed by the SILs in their implementation process, which acted as mechanisms by which the outcome of successful ERP implementation could be achieved. Of these, three were

specified as part of the requirement for SILs to hold regular "action-planning meetings" (these strategies were: problem solving, action-planning, and highlighting discrepancies between current behaviours and their goals).

Mechanisms of behaviour change	Example	Used by
Problem solving	Multidisciplinary discussions to identify specific barriers to change and strategising how to overcome these	SIL1, SIL2, SIL3
Action-planning	Delegating specific tasks to staff members to plan and address barriers to change	SIL1, SIL2, SIL3
Highlighting discrepancy between current behaviour and goal	Ward audit conducted and results discussed at action-planning meetings	SIL1, SIL2, SIL3
Review outcome goal(s)	Results of ward audits presented at action-planning meetings	SIL1, SIL2, SIL3
Demonstration of the behaviour	Going onto the ward and working alongside staff in a practical capacity; demonstrating desired behaviours e.g. using new footwear with patients (and explaining the benefits of these)	SIL3
Use of a credible source	Providing evidence/rationale for the desired change in practice, relating the changes to best practice	SIL3
Rewarding behaviour – practical or material	Providing certificates of involvement on the project, which can be used as part of Continuing Professional Development portfolio	SIL2, SIL3
Rewarding behaviour – recognition & thanks	Thanking staff for their hard work, highlighting the benefits it has for patients	SIL1, SIL2, SIL3

Restructuring the physical environment	Including new documentation (e.g. delirium assessment) in with admission packs, to prompt staff to complete these	SIL2, SIL3
Framing/reframing the issue	Explaining to staff that the changes may not only benefit patients but will also reduce the burden on staff in the long-term	SIL3
Verbal persuasion	Engaging with staff on the ward, discussing any concerns they may have, and reassuring that the requested changes were within their capabilities	SIL2, SIL3
Imaginary punishment	Asking staff with children how they would feel if they were told that there were strict visiting hours and they couldn't see their children on the ward when they wanted to	SIL2

Table 8: Mechanisms of behaviour change used by SILs

While it is difficult to know why the different SILs chose these different approaches, SIL2 and SIL3's previous ward experience may have given them valuable insights into ward processes, which may have prompted different approaches to problem solving. In contrast, SIL1 had no previous experience of working on a ward, and struggled to relate to staff on the ward. Aside from the strategies related to action-planning meetings, SIL1 only employed one other approach, thanking staff for their efforts in improving care on the ward. She used the structure of the action-planning meetings as the main forum for influencing change at her site. As she restricted attendance to staff members she felt were "more influential" (i.e. head physiotherapist, dementia team, orthogeriatricians), she may have inadvertently restricted the potential successful implementation of PERFECT-ER at her site. A greater awareness and understanding of the breadth of behaviour change techniques may have helped the SILs in their process of implementation, particularly when they encountered barriers or issues with the strategies they had originally selected. This could be addressed by providing specific behaviour change and implementation strategy training when initially appointing a change agent (Redfern and Christian, 2003; Bauer *et al.*, 2015).

SIL3 used the broadest range of implementation strategies, demonstrating her creativity, initiative, and broad-minded attitude. Her decision to demonstrate goal behaviours was particularly effective as she was not only able to role-model the desired behaviour change, but this served as an opportunity to problem solve with staff in a different context from the formal action-planning meetings. Despite widening participation to her action-planning meetings (i.e. encouraging attendance from all staff, regardless of staff group), she observed that unqualified staff members (e.g. healthcare assistants) did not appear confident at participating in group discussions. To ensure that their insight was included in the implementation process, SIL3 engaged with these staff members directly on the ward, when she worked alongside them in their healthcare duties. By doing so in a setting that was more comfortable for them to speak openly, she was able to make them feel valued and supported (context). This allowed them to communicate effectively about the ERP process (mechanism), which not only helped them to feel involved and invested in the ERP, but also allowed for alternative insights into practical barriers to implementation (outcomes) that may otherwise have been unavailable.

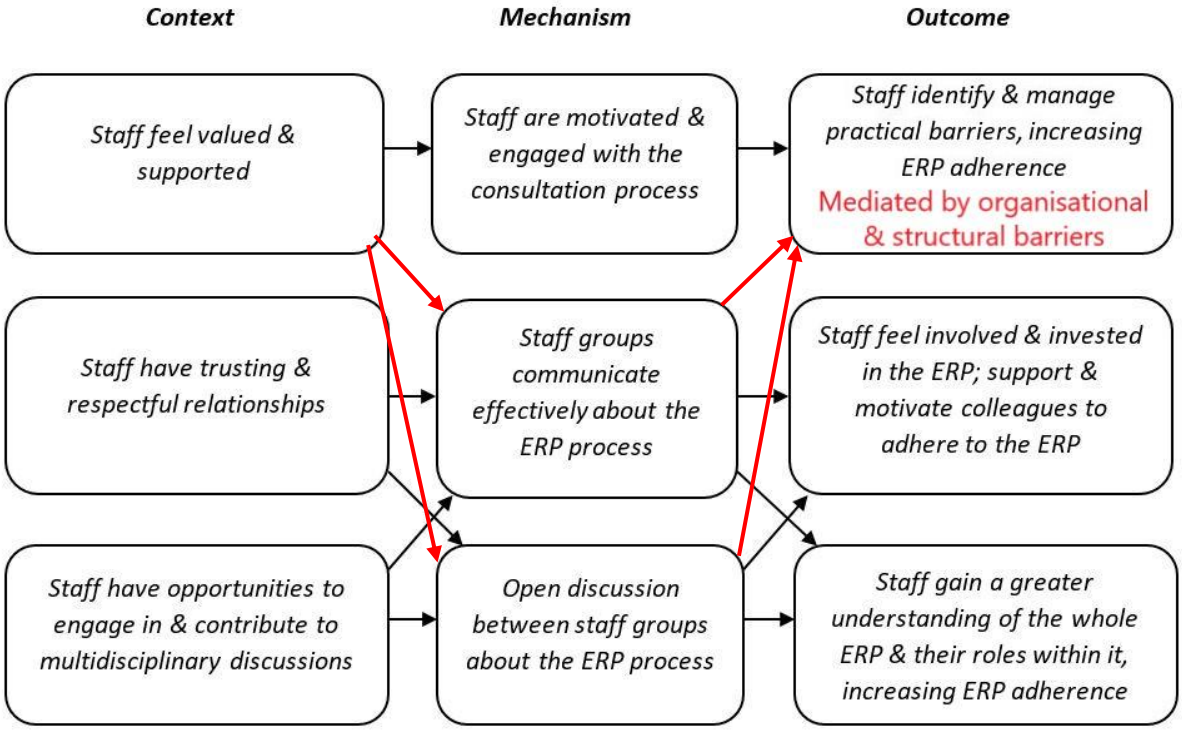

Figure 7. Developed programme theory of staff consultation

Although this approach did not enable these staff members to participate directly in open discussions in a multidisciplinary action-planning environment, it highlighted the importance of creative approaches when engaging stakeholders in the consultation process. SIL3's experiences further developed my understanding of how change agents play a pivotal role in facilitating effective

staff consultations. Whilst this greater insight into the consultation process did not contribute any additional core elements to the initial programme theory developed in my realist synthesis (see section **2.3.2**), it highlighted the interconnectedness between context, mechanisms and outcomes, identifying alternative circumstances under which generative mechanisms may be triggered. To reflect these newly identified interactions between contexts and mechanisms (not previously observed in ERP implementation literature), I developed my initial programme theory of staff consultation to reflect this (see Figure 7).

As discussed previously**,** the actual process of implementation receives less attention and consideration than the content and development of the ERP itself. Although the SILs criticised the design of the ERP as lacking robust evidence base, they did not demonstrate the same concern for an evidence-based approach to implementation strategy. I argue that a strategically designed implementation strategy is equally important to the design of the intervention itself. There is a need to identify not only what changes we want to see in healthcare but also how those changes are achieved in practice. Arguably, the design of the PERFECTED WP2 incorporated a built-in implementation strategy. The PERFECTED WP2 process involved the use of SILs as key change agents, and their running of ward audits followed by multidisciplinary "optimising care sessions" as a means of consulting staff to overcome barriers to implementation. Both of these were key facilitators to successful implementation as identified in my realist synthesis of ERP implementation literature in **Chapter 2**. The SILs, tasked with coordinating the implementation process, worked with staff to ensure that they understood the rationale and purpose of the ERP. However, interview data from the SILs shows their own understanding of the role and of the PERFECTED WP2 research process was incomplete, and this affected their ability to fulfil their duties as fully as possible.

None of the SILs had previous experience of coordinating the implementation of a pathway of this kind before, and although they received guidance from the PERFECTED research team about how to collect appropriate research data for the project, they were mostly unguided in how best to effect change in practice. From my interviews with the SILs, it is clear to me that they did not have expertise in behaviour change strategies or process implementation. This is not something I would expect nursing staff to have expertise in, beyond some knowledge of health behaviour change directly related to patients. However, the role of SIL was specifically to lead the process of service improvement, i.e. to coordinate and manage the implementation of a new and significant hospital process. As such, an ideal candidate for this position might be someone who not only had a working knowledge of the hospital ward environment, and how to conduct audits and research appropriately, but also some level of understanding of process implementation or behaviour change strategies, to formulate an appropriate plan for implementation. Perhaps this is a weighty

expectation, considering implementation science is a relatively new and emerging discipline. A viable alternative would be to consult with organisational or behaviour change specialist to discern the most appropriate implementation strategy for a complex pathway and the specific context within which it is being introduced. Incorporating some element of implementation science into the SILs' work place induction might improve their understanding of the breadth of possible approaches to organisational change, and highlight the importance of a structured implementation strategy (Bauer *et al.*, 2015).

In line with previous ERP implementation programmes reported in the literature, none of the three hospital sites saw 100% adherence to the ERP. Specific contextual differences played some part in this, as the different sites had different staffing levels and available resources, and certain elements of the ERP (e.g. 7-day rehabilitation provision) were not possible under these circumstances (see section **5.4**). However, the implementation process, as mediated by the SILs, did reveal areas of low adherence which were successfully addressed. Through the cyclical process of observations, audits and action-planning meetings (also referred to as "optimising care sessions"), each of the SILs was able to highlight areas where the ward was not always enacting the pathway, and worked collaboratively with staff to address to improve adherence scores on subsequent audits. Without the SILs *in situ* coordinating this, it is unlikely that these issues would have been addressed. Despite this success, the SILs all expressed frustration at the protracted process of change, and concerns about the long-term sustainability of the pathway. Both issues are key concerns of implementation scientists (Michie *et al.*, 2005; Griffiths, 2017), and ongoing research aims to develop ways of both expediting the process of change, and ensuring change persists.

5.3 Creating readiness for change

To implement PERFECT-ER, a number of organisational and behavioural changes had to occur. Unanimously, the SILs agreed that facilitating organisational change was far more challenging than changing the behaviour of ward staff. Implementing change at an organisational or structural level is often a complex and protracted process, requiring the involvement and approval of senior management and governance teams. Some of these changes were at a ward level (e.g. changing documentation) and therefore possible. Other changes concerned Trust-level or even national standards (e.g. allocated resources such as staffing levels) and were unlikely to be addressable within the scope of the project. However, the SILs played a pivotal role, identifying instances where ERP implementation required organisational-level change, and were able to instigate the processes necessary to affect these changes in the longer-term. Predominantly however the SILs enacted change which modified staff behaviour.

Changing staff behaviour is also challenging, as it requires that staff not only understand what is expected of them, but that they are capable of achieving this, and motivated to do so. Assuming the desired change in behaviour is practically possible (i.e. staff have sufficient opportunity to enact the desired behaviour, there are no structural or organisational barriers preventing the desired behaviour), the change process then proceeds at a group and individual level. The SILs, whether consciously or unconsciously, supported this process by creating "readiness for change" in the staff they worked with (Armenakis, Harris and Mossholder, 1993; Weiner, 2009; West, 2016). Creating readiness for change is conceptually distinct from reducing resistance to change, as the former suggests a proactive approach to implementation, and the latter a reactive response to staff reluctance to enact desired behaviours. Although the staff involved in PERFECTED WP2 process may not have been actively resistant to the changes imposed by PERFECT-ER, this absence of resistance does not necessarily entail a readiness to change, as staff may have been ambivalent about the pathway. Despite recognising the benefit to introducing the proposed pathway, staff may anticipate issues in achieving this new way of working. In some instances, there was a perception in ward staff that making the required changes would increase their workload (Hübner *et al.*, 2015), and to a certain extent this is true. Introducing new ways of working, which challenge habitual practices, requires some initial concerted efforts on the parts of the staff enacting these practices (Redfern and Christian, 2003; Sirkin and Keenan, 2005). This is true of any organisational change, in any work setting, but can be particularly challenging for healthcare staff, who work long and demanding shifts, with multiple high-priority tasks (Portoghese *et al.*, 2014; Hübner *et al.*, 2015). Staff had to make pragmatic decisions about how to prioritise these tasks, and it is likely that they prioritised immediate patient care over implementing changes with uncertain benefits to their current practice.

Given what I discussed in section **5.2** regarding the SILs reactive approach to developing implementation strategy, it is challenging to see how the SILs promoted "readiness for change" in the ward staff, but it is possible to distinguish between developing implementation strategy proactively, and working proactively with staff to encourage change. The SILs all worked to promote readiness for change, and reduce resistance to change, at different stages of the implementation process. Reducing resistance to change occurred when specific barriers to implementation were identified during the change process, but promoting staff readiness for change occurred throughout the twelve-month research process. Particularly note-worthy in creating readiness to change was SIL3's efforts to physically demonstrate the value of the newly proposed ways of working: she was able to promote staff readiness to change by showing how the pathway benefitted not only the patients that they supported, but could also streamline current practices (Shaw *et al.*, 2012). Although in the short-term, implementing PERFECT-ER required focused effort from staff, in the

long-term (once the new behaviours became habitual), they could serve to reduce workload by consolidating current practices, or introducing less labour-intensive ways of working.

Throughout the implementation process, the SILs had the challenging task of managing a complex network of interpersonal relationships with a broad range of staff from various disciplines. The SILs engaged directly with staff in a variety of ways, some of which were prescribed as part of their role in PERFECTED (e.g. the action-planning meetings) and some which were borne of their own initiative (e.g. SIL3 working alongside staff on the ward). The relationship between change agents and the staff that they are working to engage in change can have far-reaching consequences for organisational change efforts (Ford, Ford and D'Amelio, 2008; Oreg and Sverdlik, 2011), as a negative perception of the change agent can increase staff resistance to imposed changes. For SIL2, who already had good relationships with the staff she was working with, this was not a barrier to implementation, but SIL1 had to make concerted efforts to engage staff with the ERP implementation process. Ultimately, where these working relationships were well negotiated, they were mutually supportive and acted as key facilitators to the successful implementation of the ERP. Effective communication aided staff members' understanding of the pathway and its rationale, increasing motivation and appropriate adherence (Pearsall *et al.*, 2015).

By forging good working relationships with ward staff (context), SILs were able to work productively and collaboratively within a multidisciplinary team (mechanism) to achieve shared goals, and to improve patient care (outcome). By recognising the value in different staff members' backgrounds and experiences, the SILs were able to gain new perspectives on implementation challenges. This relates back to the findings from my realist synthesis, highlighting the importance of involving staff members in the process of implementation. Not only does it illicit different insights and foster creative solutions to barriers to implementation, but staff felt their input was valued which promoted their motivation and readiness to change.

5.4 Managing insoluble challenges

Despite a protracted implementation process with a dedicated coordinator and several cycles of audit and team discussion, the SILs still found certain elements on the PERFECT-ER pathway were not possible to implement. They unanimously reported a lack of sufficient resources and other organisational factors to be a significant barrier to a complete, successful implementation of the ERP as prescribed (a common complaint in healthcare intervention implementation, and in care provision more generally (Killett *et al.*, 2013; Lyon, Solomon and Harrison, 2014; Brewster *et al.*, 2015; Lau *et al.*, 2015)). Certain elements of the pathway, such as the provision of seven-day rehabilitation service, were impossible at all three sites due to a lack of appropriate, available staff.

Although this may have been achieved in the longer term, with strategic consultation with senior management and clinical commissioning groups, it was beyond what may have been realistically expected of these SILs, employed as part of a twelve-month ERP implementation process.

How a change agent reacts to this change barrier impacts on their motivation and attitude toward the ERP, and subsequently affects the implementation process. For example, SIL3 readily accepted that certain factors were beyond her control, and focussed her efforts on elements that she knew she could realistically influence. Conversely, by her own admission, SIL1 spent a long time at the start of the process pursuing changes that were impossible to affect (due to a lack of resources, or entrenched structural barriers). Expending this effort and still not able to achieve her aims, SIL1 became frustrated and demotivated, questioning her value and considered resigning from her post. As discussed in section **5.2**, this frustration could have been avoided by thoroughly assessing the changes required to implement the pathway, and planning strategically how these changes might be affected.

In some cases, the SILs identified elements "impossible to implement" prematurely, that is to say before they had brought the issue to an action-planning meeting for collaborative problem solving with a multidisciplinary team. This is particularly true in SIL2's case, as PERFECTED researcher field notes suggest that she focussed discussion to the elements that fitted with her own aims, rather than concentrating attention on all of the elements of PERFECT-ER as a whole. Although it can be useful to categorise the types of changes required in order to prioritise tasks throughout the implementation process, it is important that change agents remain open-minded to exploring potential solutions to implementation barriers. It is unlikely that any change agent will be able to consider all potential solutions to any given implementation challenge, hence the importance of collaborative action-planning meetings. SIL1 demonstrated this toward the end of the implementation process, when she again raised the issue of 7-day rehabilitation provisions, which she had previously deemed impossible to implement due to resource restrictions and staff availability. However, in this late meeting, a newer member of physiotherapy staff proposed a potential solution (redistribution of staff working hours), and SIL1 reconsidered what was and was not achievable. By keeping all of the ERP elements on the action-planning agenda, SIL1 provided staff with the opportunity to engage in and contribute to multidisciplinary discussions (context). This lead to open discussions between staff groups (mechanism) and ultimately creative problem solving regarding an issue she had previously seen as insoluble (outcome). This would not have been possible without a broad-minded, inclusive approach.

5.5 Clearly defining the role, its responsibilities and expectations of change agents

As highlighted by my realist synthesis, the role of a central change agent, such as a SIL, is integral to the successful implementation of an ERP. As such, it comes with a huge weight of responsibility, which can feel isolating and at times, overwhelming. In the context of PERFECT WP2, the SILs struggled and coped with challenges in their own individual ways. In many ways their situation was unique, as the format of PERFECTED meant that their identity (and sense of belonging) was split between being "ward staff", attached to their hospital, and being "research staff", attached to the UEA. They had each other for support, meeting regularly despite geographic distance, and also via telephone and email, to not only discuss common issues but provide moral support to one another. They also had the added influence of myself, as an independent researcher with a special interest in their unique situation, giving them a voice, and an opportunity to discuss their role and process. Although this may have been beneficial to their experience, as participants in research they received perhaps more and varied support and attention than change agents would normally expect in usual implementation.

From analysing the data from across all three hospital sites, a significant issue was that the SILs appeared to have several fundamental misunderstandings about their role, the project, and its purpose, from the beginning of the process. In the early stages, all three SILs expressed uncertainty as to the responsibilities in their role and what was expected of them. It wasn't until midway through the research process that the SILs realised that a key focus of WP2 was to observe the process of implementation itself, to see *how* changes in practice are made, and unpick *why* certain elements were more challenging to implement. The SILs had been so focussed on trying to score 100% adherence across the entire pathway that they caused themselves considerable frustration and distress trying to implement changes that were, by their own later admission, simply impossible in their hospital. Without clearly defined goals, the SILs were unable to formulate a meaningful strategy to fulfil their role (Morrison, 1994). It was not until they began to understand the purpose of the project and its aims that they began to engage meaningfully with the SIL role, and even then, with uncertainty regarding what was expected of them. SIL1 focussed on achieving high adherence, SIL2 described the process as "ticking boxes" whilst pursuing her own personal aims, and SIL3 saw this process as an opportunity to raise better awareness and understanding of patients with dementia. Observing such disparate goals in the three SILs, I was not certain myself what the "true" purpose of the SIL role was. The peer support discussions that the SILs orchestrated between themselves helped them to converge some of their understanding of the role, but they did not always agree on the responsibilities and purpose of the role, or how best to proceed. This was partly

down to individual and contextual differences, but also potentially a failure to request clarification from the PERFECTED research team.

All three SILs expressed frustration throughout the twelve-month research process that PERFECT-ER contained very little that specifically related to the care of patients with dementia. Ostensibly, PERFECT-ER was designed with the aim to improve hip fracture care specifically for patients with dementia, and as such, the SILs (as perhaps anyone would) expected the ERP to have a strong focus on meeting the specific needs of this group of patients. SIL2's criticisms of PERFECT-ER were predominantly focused on the lack of robust, published literature to support the use of ERPs for PwD. As such, she thought the pathway did not promote "evidence-based practice", and struggled to motivate herself to encourage its uptake by staff. While I understood their frustration, a closer look at the PERFECTED WP2 protocol does explain the rationale for this: PERFECT-ER was designed following expert consultation, a systematic review of supporting literature, and with reference to clinical guidelines (see section **5.2**). It was designed to optimise care for hip fracture patients with have dementia, but as hip fracture is such a common injury in older adults, PERFECT-ER was designed to have a "broad bandwidth", i.e. able to improve care for all older adults present in wards where PERFECT-ER is implemented. This broad reach would not be possible if the pathway was overly specific to patients with a confirmed diagnosis of dementia: the pathway as designed aimed to address the needs of PwD, but was also able to optimise care for patients who may or may not have cognitive impairment, regardless of diagnosis. The SILs had expected the pathway to be a certain way (i.e. highly dementia specific), and when it did not meet their expectations, this created a barrier to their full engagement with the process. They did not fully understand the ERP and its rationale (context), which limited the extent to which they could address staff queries regarding the pathway (mechanism), and as a result, staff understanding of the pathway was limited (outcome). This misunderstanding was partly due to the nature of the PERFECTED WP2 process. When the SILs commenced their role, the pathway was still in the design phase, and as such they were unsure what the pathway would contain.

All three SILs began the implementation process with "unresolved roles", being unsure of what their job entailed or what was expected of them (Robbins and Finley, 2000). By the end of the process, they had each conceptualised for themselves what it meant to be an SIL or "ERP change agent", and were able to identify what key skills they each possessed that they felt were important to fulfilling that role. Relying on the SILs to define the role and its responsibilities for themselves meant that they encountered delays and frustrations otherwise avoidable. It also meant they conceptualised the role differently and, although there were many similarities in their ideas, this may have

fundamentally affected their understanding of their responsibilities and how they chose to prioritise them.

5.6 Appointing an ERP change agent

By clearly defining the role and its responsibilities prior to commencing the implementation process, decision makers are in a stronger position to identify the skills required to fulfil the role of change agent, and therefore appoint the most appropriate person into the role. Existing research into change agency is limited, particularly in regards to the role and responsibilities within a healthcare context. However, one key review by McCormack et al (2013) consolidates research into the role of change agents within the promotion of evidence-informed healthcare, and the subsequent theory provides a useful grounding for exploring the key requisite qualities for an effective change agent. Through realist review, McCormack et al highlight the importance of strong leadership, embeddedness, and an ability to capitalise on positive interactions with staff, as key attributes to aid change agent effectiveness. These attributes were identified in my own realist synthesis, expressed in the programme theory related to change agency which I developed through this process. These attributes enable change agents to work collaboratively with staff to identify and manage barriers to implementation, promoting successful ERP implementation.

A key component to SIL success identified in my empirical research is a strong sense of self-efficacy, the SIL's assessment of their capability to fulfil their role effectively (Bandura, 1997). As the central coordinator for the ERP implementation, the SIL needed to have confidence and self-belief in order to successfully motivate and lead others (Buchmann, 1997; Pearlmutter, 1998; Paglis and Green, 2002). All three SILs explained that the SIL role was an isolating and lonely position, but a strong confidence in their abilities, coupled with the initiative to seek support and guidance from appropriate others made this manageable. Self-efficacy acted as a critical mediator for the other key attributes described above: regardless of existing relationships with staff, or existing skills or experience, if a change agent holds a lack of self-belief in their own ability, this can prevent them from utilising these attributes to their advantage. This was demonstrated by SIL1, who, despite being an experienced theatre nurse with a good working knowledge of her local context and existing relationships with some key members of staff, expressed doubts about her own abilities and suitability for the role. This was prompted by her perceived "difference" to the other two SILs, as she did not come from a ward-based background. Not only did SIL1 discuss this issue herself, but both SIL2 and SIL3 also commented on it in their interviews with me.

At the start of the ERP implementation process, all three SILs expressed uncertainty regarding their role and responsibilities, and concerns about how effective they would be in carrying out the

implementation process. However, SILs 2 and 3 settled into the process reasonably quickly, and while they encountered challenges and frustrations, there was a sureness and confidence to their decisions and actions. In contrast, SIL1 regularly spoke about how her situation differed from the other SILs, highlighting her lack of ward experience and continued to question the value that she brought to the research process (context). This self-doubt had knock-on effects on her confidence to act, for example she hesitated to feedback her thoughts and criticisms of the pathway design (mechanism). I speculate that this low sense of self-efficacy may also have been a contributing factor to SIL1's limited use of behaviour change techniques to promote ERP adherence with ward staff. Although it is impossible to extrapolate to what extent this may have affected the outcomes of her implementation process, SIL1's prolonged focus on her value to the research process highlights the importance of self-efficacy in goal achievement.

SIL1's low self-efficacy and confidence caused her a great deal of personal distress, to the extent that she considered resigning from her role and leaving PERFECTED WP2. However, her receiving appropriate management and peer support mediated this. After receiving support and guidance from her workplace supervisor and a member of the PERFECTED research team at the UEA (context), SIL1 began to appreciate the value in the different perspective that her background and experience afforded her (mechanism). After this, SIL1's discourse regarding her value in the role changed, and she was more motivated to complete the research process to the best of her ability. She was more able to appreciate the importance of what she brought to the process, and committed to decisive action (outcome).

SIL1's experiences highlight the importance of self-efficacy in organisational change management, as organisational change theory suggests an interconnectedness between a change agent's high sense of self-efficacy (context), their ability to make decisive, informed decisions (mechanism), and subsequently achieving desired outcomes (Gist, 1987; Paglis and Green, 2002). An individuals' sense of self-efficacy is dynamic, and supervising staff can take proactive steps to improve the change agent's sense of self-efficacy, having positive knock-on effects for achieving implementation success (Nielsen *et al.*, 2009; Salanova *et al.*, 2011). SIL1's experiences highlight appropriate supervisory and peer support as one potential option, but clearly defined roles and responsibilities, appropriate training, and regular progress meetings can also serve to improve self-efficacy (Bandura, 1982; Manojlovich, 2005), having a positive impact not only on the change agent, but the ward team as a whole. It is difficult to ascertain whether SIL1's struggle with self-efficacy was specifically related to her perceived difference from the other two SILs, or if this was an individual difference (i.e. that SIL1 had low confidence in her own abilities, regardless of her professional experience). However, SIL1's experience did highlight other potential issues worthy of consideration when appointing a change

agent. Predominantly, SILs 2 and 3 spoke about SIL1's lack of ward experience as being a practical disadvantage as she did not have the necessary insight into how a hospital ward functioned on a daily basis, or understand some of the practical challenges that ward staff face. SIL1 appreciated this presented some challenges in the early stages, but ultimately felt that not having a background of working directly on the ward was an advantage. She described herself as "not being invested in the ward", i.e. because the ward was not "hers", she was an outsider, this enabled her to view the situation more objectively, and not feel so personally affected by the day to day activities of staff. She also did not feel that the ward's performance reflected on her directly.

In this respect, SIL1 contradicts McCormack et al (2013)'s emphasis on the need for change agents' "embeddedness" in the intervention setting to promote implementation success. There may be some validity in this. SIL2 was thoroughly embedded in her context, having worked as a ward sister at her site for many years, and was familiar with the majority of the staff she was tasked with coordinating in implementing PERFECT-ER. However, instead of this embeddedness aiding her ability to successfully implement the pathway, it meant that she commenced the process with preconceived aims for how she wanted to address hip fracture care for patients with dementia at her site, and these aims were not always in agreement with the pathway. By her own admission, she used the PERFECTED WP2 process as an opportunity to devote time to implementing the changes she wanted to see. Although her embeddedness on the ward aided her understanding of how best to achieve these changes and gave her a certain degree of influence and authority over ward staff, it also served as a conflict of interest to achieving the project goals for PERFECTED WP2. In this instance, although SIL2 was familiar with local practice, processes and policies, and had good rapport with staff (context), she also held strong personal views about how best to improve current practice, which prevented the triggering of necessary generative mechanisms to bring about the changes required by PERFECTED.

In contrast, SIL1's more detached position did not guarantee her immunity to being personally affected by the change process. Particularly in the early stages of the implementation process, she expressed feelings of self-consciousness. She thought the ward staff perceived her as "doing nothing" when she was present on the ward and taking field notes, which may have negatively affected her sense of self-efficacy. SIL2 and SIL3 did not struggle with this sense of self-consciousness about their role and duties. They had a good pre-existing rapport with staff (context), which allowed them to speak confidently to staff about what they were doing and why they were doing it (mechanism), engaging staff in the ERP implementation process (outcome). As SIL1 built a better rapport with staff on the ward, she felt less self-conscious about conducting her SIL duties, but as a newly accepted member of the ward staff "in-group", became increasingly protective of this new

identity (Cremer and Tyler, 2005; Miller, Maner and Becker, 2010). Despite her ongoing reassurances to staff that the checklist and ward audit processes were not an evaluation of staff performance, but served to evaluate the process of ERP implementation, SIL1 expressed in interview a sense of injustice at the fluctuating audit results. As PERFECT-ER developed, and some elements of the checklist were re-worded, areas where Hospital 1 had scored highly now scored poorly, and SIL1 found this upsetting, stating she felt it reflected poorly on her and her ward team. This level of personal involvement in the audit process may have had implications for her objectivity in later checklist completion.

Although McCormack et al (2013) suggest change agent embeddedness is an important factor in their effectivenes, it is more complex than embedded versus not-embedded. SIL2 was highly embedded, allowing good rapport with and respect from her ward colleagues, but this was mediated by her personal aims and priorities for improving care on her ward. Being so deeply embedded in the context, she prioritised her ward staff in-group membership over her responsibilities as a change agent for PERFECT-ER (Everett, Faber and Crockett, 2015), limiting the extent to which she was able to implement the pathway as designed. Conversely, SIL1 began the implementation process with little pre-existing relationships with staff, and once she had achieved a degree of in-group membership, she began to focus more on how the scores reflected on her own and her ward staff in-group's performance, than on how the ERP was implemented or functioned in practice. SIL3 demonstrated a "happy medium", as she was embedded enough in the ward context (as she had experience as a ward staff nurse) to allow her insight into the ward and demands on staff, but not so embedded that she prioritised these insights over her responsibilities as a change agent. Exactly how this balance of embeddedness can be reached or replicated in other contexts is not immediately clear, but comparing these experiences demonstrates that it is not simply a case of appointing an internal member of staff from a specific staff group.

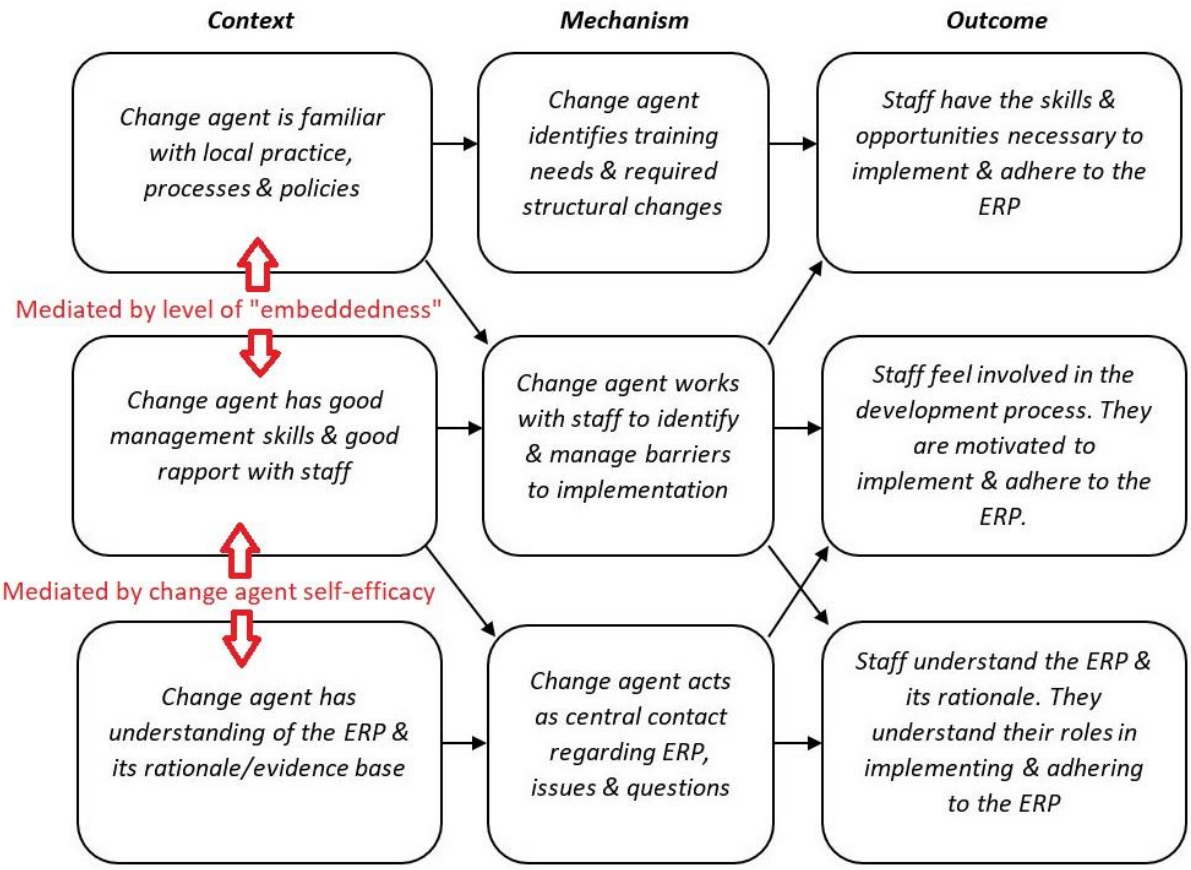

Figure 8. Developed programme theory of change agency

Despite this, the programme theory of change agency (originally given in section **2.3.2**) proved robust in the context of my empirical research, with the addition of "embeddedness" and "change agent self-efficacy" as mediators, interacting within specific contexts and their subsequent effect on triggering generative mechanisms. To reflect this, Figure 8 shows the CMO configurations related to the programme theory of change agency, with these mediating factors.

The change agent role does not require the individual to be a knowledgeable expert in all areas concerning the ERP or the setting in which it is being introduced. More valuable is the ability of the change agent to solicit the expertise of others and enable collaborative working between staff (Morgan and Zeffane, 2003). Central to this are good communication and interpersonal skills, a strong sense of initiative, and an awareness and appreciation of the skills of others. This was demonstrated by SIL3, who by her own admission lacked knowledge and experience in certain areas, but demonstrated creativity in addressing these gaps in her understanding. She worked collaboratively with all affected stakeholders, and did so with a flexible approach. For example, she did not discriminate in who she invited to participate in her action-planning meetings, explaining that different members of staff offered different, but equally valuable insights into how best to approach barriers to implementation. She appreciated the complex network of relationships

between staff members, recognising that unqualified staff members (i.e. healthcare assistants) felt less empowered to speak up in these meetings, and rather than waiting for their input, she worked proactively to engage with them on the change process. She used her initiative and established the best way to solicit their opinions would be to physically work alongside them on the ward, using this more relaxed setting to have informal discussions with these staff, soliciting their opinions on how change might be achieved. SIL3 gave staff appropriate fora for discussion, making them feel valued and respected (context). Consequently, staff were motivated and confident to engage in action-planning process (mechanism), which then enabled them to offer practical solutions and insights into implementation issues (outcome). Although this was not ideal (as SIL3 appreciated the importance of multidisciplinary, group discussions, for productive problem solving), she saw it as a pragmatic solution for accessing valuable insights from staff who might otherwise not feel able to engage with this process.

These insights were not possible in the approaches adopted by SIL1 and SIL2. SIL2 often relied on her position of authority as a ward sister to encourage compliance from staff members, rather than working *with* ward staff, in a collaborative way, to achieve shared goals. In interview, she explained that she had very clear aims for what she wanted to achieve on her wards (not always the same as those required by PERFECT-ER), and selectively invited staff who she felt were most appropriate regarding these. Through my own observations of action-planning meetings run by SIL2, she was directive rather than collaborative in achieving these aims, and appeared to dismiss certain items on PERFECT-ER, which didn't agree with her own aims, as "impossible to achieve" (see section **5.4**). PERFECTED researchers, in their field notes and reflections from these meetings, documented similar observations. Although SIL2 ostensibly provided a forum for group discussion through her action-planning meetings, she more often dictated rather than discussed the process of change, and the resulting meetings were less about stakeholder consultation (to discuss how PERFECT-ER might be maximally implemented on the ward) and more about encouraging staff compliance (to the elements SIL2 deemed most important).

SIL1 did not have the skills or the confidence to approach ward staff directly in their working environment. As demonstrated by her narrow use of behaviour change techniques, she relied on the structure of the action-planning meetings as the main method of encouraging staff behaviour change, and therefore ERP implementation. Even within the context of the meetings, she restricted the attendance of staff groups by inviting only selected representatives she thought would provide meaningful insights into the implementation process. Unlike SIL3, who emphasised the importance of buy-in from all frontline ward staff, SIL1 focused on involving more senior staff in the action-planning process, as she argued that change was enacted at an organisational rather than individual

level. By adopting this top-down approach to implementation, SIL1 ran the risk of the pathway being implemented through mandate, rather than stakeholder buy-in to the new way of working. SIL1 focused the majority of her efforts in addressing issues of opportunity to change, and as a result, staff capability and motivation to change their behaviour may have suffered.

The three SILs involved in my study were qualified nurses, and this follows an industry standard for change agents and ERP champions involved in the majority of existing ERP research (Slater, 2010; Rooth and Sidhu, 2012; Paton *et al.*, 2014). Although current guidelines for ERP implementation suggest that the role of change agent can be filled by professionals from disciplines other than nursing (Khan *et al.*, 2009; Crawford *et al.*, 2013), a lack of robust evidence makes judgement or comparison of nurse versus non-nurse change agents challenging. However, by taking into account the SILs' comments on the key skills they felt were necessary to fulfil their role effectively, it is possible to hypothesise how the role could be filled by different staff members, with diverse backgrounds and disciplines. In some respects, the use of a non-nurse change agent may be more beneficial, as they may bring alternative insights into the implementation process, while maintaining a balanced level of embeddedness as discussed above. The key skills necessary for an effective ERP change agent, identified through my empirical research, include a good knowledge and understanding of the pathway and its rationale, good leadership skills and rapport with staff, a strong sense of self-efficacy, and an understanding of the local context. Although these are all attributes that can be met by a member of ward nursing staff, recruitment for the role of change agent needn't be restricted to this staff group, and the use of non-nursing change agents warrants further investigation.

Regarding long-term sustainability, all three SILs concluded their role with concerns about the life of the pathway without their ongoing input and coordination. They all insisted that, for the ERP to survive long-term, a dedicated member of staff was required, and anticipated that without their ongoing input, there would be a return to previous practice. Each SIL had taken some steps to delegate certain tasks to other members of staff, but even then remained pessimistic for the longevity of the pathway, arguing that ward staff were simply too busy with other responsibilities to make the ERP a priority. An alternative to a single, dedicated change agent, is to allocate responsibility of pathway implementation to a small team of established ward staff, in an approach known as "distributed change agency" or "distributed leadership" (Buchanan *et al.*, 2007; Chreim *et al.*, 2010; Chreim and Macnaughton, 2016). This is similar to the delegation of responsibility that the SILs hoped to achieve towards the end of their time in role, selecting a small group of permanent staff to co-ordinate the ongoing promotion of PERFECT-ER within their ward. In practice, this represents a more realistic approach to successfully implementing and sustaining long-term changes

to healthcare practice, as complex organisational change is never the sole responsibility of a single individual. The introduction of an intervention such as PERFECT-ER affects, and requires motivation and input from, a broad range of staff groups. This can be facilitated by effective staff consultation, and an appropriately appointed change agent.

5.7 Reflexivity

Undertaking my empirical study involved a process of deep immersion in my dataset. Over the course of the 12-month implementation process, I worked closely with the three SILs, and developed a good rapport and insight into their experiences. Although I was investigating the process of ERP implementation, with the SILs (as key informants) providing insights via their experiences, I was surprised to find how personally affected I was by their narratives. As a result, I had to be conscious to the extent to which I formed opinions about them as individuals. Although there is always some level of subjective interpretation involved when conducting qualitative research, I made efforts to be aware of the impacts these personal opinions might impact my analysis. I found it particularly challenging to report my findings without speculating about the SILs' personal motivations. During this process, I was aware that my reporting of these narratives could potentially be seen as a form of "performance evaluation", particularly regarding the language used around adherence, compliance and audit. It was not my intention to judge one SIL as conducting their implementation in a way that was more "correct" than the others. It wasn't until I began to consolidate these narratives that I felt my reporting presented the implications of my findings in a more objective way. However, in the interests of transparency, I feel it is important to report all stages of my conceptual development as a form of audit trail, including my personal impressions of the SILs and how these transformed over the course of the implementation process. These experiences, reported in granular detail, demonstrate some of the inherent personal and methodological challenges of undertaking qualitative research.

Chapter 6 - Conclusions

This thesis explores the process of implementing a new ERP, highlighting critical factors and key concerns for decision makers to consider when introducing similar pathways to ward practice. My empirical research has described in detail the process of implementing a new ERP for hip fracture patients with dementia, informed by the experiences of coordinating change agents, who acted as key informants to the process. Although the resultant findings are in many ways contingent on the specific contexts in which the pathway operated, they concur with and further expand upon existing research into ERP design and implementation, providing a better conceptual understanding of the complex interplay of factors affecting implementation success. By analysing data collected throughout the twelve-month action research process (including semi-structured interviews with the change agents, and ethnographic data collected by the PERFECTED research team), I was able to gain insight and understanding of the challenges encountered during this process, and the individual approaches the change agents adopted in order to manage these.

Overall, the change agents identified good communication and collaborative team-working as key mechanisms for overcoming barriers to implementation, and highlighted the importance of involving staff members from across the ward in the action-planning process. By soliciting advice from appropriate parties, and discussing the outcomes of ward audits within multidisciplinary meetings, most areas of low or non-adherence were able to be addressed successfully, with positive improvements on scores on subsequent audits. However, the change agents unanimously identified certain areas of the ERP they found impossible to implement, despite concerted efforts and ongoing discussions with ward staff and higher management. These barriers were either related to a lack of resources or structural/organisational barriers which were beyond the change agents' influence. Although they did explore potential "work-arounds" to overcome these barriers, they ultimately abandoned them in favour of pursuing more achievable goals, in order to maximise the positive benefits of the ERP. With a better grounding in implementation theory, the change agents may have been able to effectively categorise the types of changes required, and more efficiently filter out the changes that were outside of their influence. They could then concentrate their efforts on the achievable changes, thus maximising the potential benefits of the proposed ERP.

Although my data collection concluded at the end of the twelve-month research period, when the change agents had finished in their post, the ultimate intention was for the ERP to persist as a long-term change in hospital practice. However, as I discovered during the interviewing process, although all three change agents were concerned with the long-term sustainability of the pathway, and had hopes that it would continue beyond them, none of them had considered any strategic planning to

ensure its continuation. This was particularly concerning for me, as considerable time and resources had been devoted to implementing the ERP to this point, and without some forward planning for long-term sustainability, would at best see a gradual decline in pathway adherence, and at worst see the ward staff revert entirely back to previous routine practice. This potential for deterioration in adherence was demonstrated in SIL2's hospital site, as she explained that while she was on annual leave, she tasked another nurse with coordinating one of her duties. However, that nurse then went on sick leave, and on her return, SIL2 discovered that, without someone coordinating that process, the task simply had not been completed by staff. This deterioration in adherence, both in terms of change agent absence due to leave, and in the longer-term, after the initially implementation effort had concluded, has been observed in similar studies of ERP implementation (Billyard, Boyne and Watson, 2007; Ahmed *et al.*, 2012). It is not clear therefore if long-term sustainability of a newly introduced ERP requires a long-standing, dedicated member of staff employed specifically to ensure pathway adherence, or if this need can be met by tasking an existing member, or members, of staff with the responsibility of championing the pathway and conducting regular audits. I suspect that once the ERP has been established for long enough, the new practices become the "new normal", and the need for constant driving of ERP aims is reduced, but this perhaps needs to be explored more fully in future ERP implementation research.

6.1 Specific recommendations for decision makers

Throughout the research process, I was conscious of a need for my findings to have "impact and importance" (Yardley, 2000), not only in terms of developing a better conceptual understanding of ERP implementation, but also to provide practical guidance for researchers and policymakers. My realist synthesis has been published in a peer-reviewed academic journal (Coxon, Nielsen, *et al.*, 2017), and I shared emerging findings from my empirical study with the PERFECTED research team after the completion of WP2, in order to inform their design of the next phase of the PERFECTED research programme. I plan to prepare further manuscripts, summarising these findings, to submit for academic publication, to disseminate my research to a wider academic audience.

Summarising the points raised in **Chapter 5**, I have three overall, specific recommendations for healthcare decision makers, when designing and implementing ERPs. Firstly, consider implementation strategy thoroughly, as it has real and significant implications for the success of any new hospital initiative, but particularly for a multimodal, multidisciplinary intervention such as ERPs. Implementing an ERP involves the introduction of a complex intervention into a complex environment with a complex network of multidisciplinary relationships, and will inevitably challenge existing, established ways of working. There are so many variables and mediating factors involved that it is impossible to simply introduce the pathway and expect success: implementation strategy

should be sensitive to local context, taking into account current practices (and how much these would need to change to ensure pathway adherence), available resources, and the capability and motivation of affected stakeholders. Implementation science is a rapidly growing area of research, and this growth highlights the growing concern with, and importance of, implementation strategies which are guided by best evidence. Evidence-based practice is made possible through evidence-based implementation.

Secondly, carefully consider the role and expected responsibilities of the change agent, and how to appoint the appropriate person to fulfil this role. Simply appointing a change agent to coordinate implementation is not enough: they need to understand what is expected of them in their role, have some insight into behaviour change theory, a good understanding of ward processes and the broad range of staff that enact them, good communication, management, and team working skills. With clarity comes confidence, and this confidence begets confidence in others. Pre-existing relationships with ward staff and familiarity with the ward can be beneficial, but more important than these is a solution-focussed attitude, good people skills and a strong sense of initiative. The latter skill set will allow a change agent to forge a good rapport with staff, allowing for collaborative problem solving, which can promote better implementation success. An overreliance on pre-existing relationships with ward staff can limit, rather than improve, ERP implementation. Although previous ERP research (including the empirical study described in this thesis) almost exclusively focuses on the employment of nurses as change agents, a background in nursing is not necessarily a requirement for an effective change agent. The key attributes needed by an effective change agent can hypothetically be met by a member of staff from a variety of disciplines, and decision makers should not limit this role by overly focusing on the ward's nursing cohort.

Finally, it is vital to acknowledge that staff affected by the implementation of a new ERP are not passive actors, but active stakeholders who play a vital role in implementation success. Involving all relevant stakeholders in the ERP implementation process (including healthcare and domestic staff, who are often overlooked in intervention design and implementation consultations) has bidirectional benefits. Firstly, it is an opportunity for change agents to ascertain and address any areas of low motivation, insufficient capability, or lack of adequate opportunity that might act as barriers to maximising implementation success. Secondly, it facilitates effective, collaborative group working, allowing for a broad range of perspectives and expertise on any given implementation challenge. Being directly involved in implementation strategising in turn prompts a sense of staff ownership in the process of change, further promoting motivation to change. Engaging and motivating staff, ensuring that they have the necessary skills, understanding and opportunities

available to them in order to enact the changes required, ultimately dictates the successful implementation, and long-term sustainability, of a newly introduced ERP.

6.2 Strengths & Limitations

In the course of completing this research, I was limited in what I was able to achieve partly due to my position as a PhD researcher, as I had limits on my time, my available resources, and my understanding of the subject matter and surrounding relevant theory (although, able to perceive the gaps in my understanding, I could then address these throughout the research process). However, this is true of the majority of research projects, which are often limited by funding, time, and availability of research team members. Completing my PhD research helped me to develop important project management skills, addressing my research questions appropriately with the time and resources available to me, and adapting my approach when met with challenges and unexpected delays.

A further limitation was the methods I used. Both realist synthesis and qualitative approaches have been criticised for the degree of subjectivity they involve. Although it is true that interpretative analytic decisions made throughout the course of conducting this research were informed by my own personal context and experience, I strove to give a thorough and detailed account of my research process throughout, to give the reader insight into how and why I reached my final conclusions. I have explicitly stated the conceptual framework underpinning my research as a whole (see sections **1.4** and **3.2**) and have thoroughly considered and addressed how I ensured research quality throughout (section **3.4**). Although it could be argued that, due to the subjectivity involved in conducting research of this type, the results achieved are not replicable, this forms part of a much larger discussion concerning the extent to which research of any type involves some degree of subjective interpretation. Broadly speaking, qualitative research and realist evaluation are both methods employed to explore the impact of context on phenomena, and play a valuable role in developing understanding into why, sometimes, quantitative findings are not replicable either (see section **3.4** for a more full discussion regarding this).

The specificity of my research, particular in regards to the context in which it was conducted, limits the applicability of these findings. The ERP under study was designed to meet the needs of a specific demographic (i.e. people with dementia who fracture their hip), and the specific design of the pathway, as well as the context in which it was employed (i.e. orthopaedic trauma wards) will likely have impacted the ways in which staff and change agents approached the implementation process. Added to this, as my research was conducted within the context of a larger action research project (PERFECTED), due to the aims of the specific stage of the project, the ERP under investigation was

still under development. This meant that throughout the implementation process, the pathway being introduced underwent a number of changes, and the checklist by which the SILs assessed pathway adherence also changed (i.e. in one audit cycle, the ward may have scored highly on one element, but in the following cycle, the score may have dropped due to changes in how the element was assessed). Although this ongoing development was with an aim to develop a more effective, workable pathway, with clear criteria for assessing adherence, this had an impact on the implementation process which would not usually be present in typical ERP implementation efforts.

The change agents appointed to coordinate the implementation of the ERP were also employed as co-researchers, collecting data for PERFECTED. This is unusual for a study of ERP implementation, as traditionally change agents are appointed purely to coordinate change (although part of this role may involve conducting audits, this is to assess pathway adherence and inform implementation strategy), and they are not usually involved in the formal research and development process. I speculate that this "dual role" will have affected the SILs' experiences of being in the change agent role, as the additional duties and focus impacts their prioritising of tasks and sense of in-group identity. This has implications for the findings from this research, and their applicability to other contexts, as the SILs' decision making was influenced by both their duties as change agents, and their responsibilities as co-researchers. The interviewing process also provided them with the opportunity to speak openly about their experiences, safe in the knowledge that their transcripts would be anonymised and not scrutinised for any purpose other than addressing my research aims. Although these interviews were conducted to address my research aims, it is worth noting that participating in qualitative research can have therapeutic benefits for participants (Murray, 2003); during the process of conducting the interviews, I became aware of how valuable the SILs found these interviews, as they often experienced their role as isolating, and felt that they went "unheard" at times. The unintended consequence of this is that the SILs received an extra layer of informal "support", which would not be available to change agents in typical ERP implementation attempts. Considering the level of pressure experienced by the SILs in PERFECTED WP2 (particularly SIL1, who expressed that in the early stages of the process, she considered resigning from her role), it is worth speculating how they (and change agents employed as part of other ERP implementation efforts) might have managed the stressors of the role, without these multiple opportunities for useful and supportive discussion.

That being said, this research provides valuable insights into the process of coordinating the implementation of a new ERP. It highlights some important considerations for clinicians and policymakers looking to utilise change agents such as SILs for ERP implementation. Even with similar backgrounds and the same ERP to implement, these SILs had diverse experiences and varying

degrees of success, but regardless of their different experiences of the process, they shared some significant areas of overlap, including the issues of structural barriers to change, a lack of sufficient resources, and the importance of clear communication for effective problem solving. As explained in **Chapter 2**, no single, general causal theory can ensure ERP implementation success across all possible contexts, but by developing a better understanding of the critical factors affecting implementation success, these findings provide useful and practical guidance for future ERP implementation efforts.

6.3 Implications for future research

Existing ERP literature predominantly features the employment of nursing staff as ERP change agents. This was true of the SILs involved in my study, who were all qualified nurses. Although current guidelines suggest that the role of change agent can be fulfilled by staff from other disciplines, this has not been reliably demonstrated in research. Given the findings from my research, I hypothesise that the key skills required by an ERP change agent could be fulfilled by staff members who do not have a nursing background. Employing nursing staff into the role of a change agent has potential advantages and disadvantages, related to their expertise, professional priorities, and familiarity with clinical care. Current academic literature supports the appointment of nursing staff as effective change agents, and my empirical research highlighted a number of important advantages to using SILs with a nursing background, including their existing, in-depth knowledge of ward practice, sensitivity to the pressures and workloads of ward-based staff, and (when recruited internally), existing working relationships with staff affected by changes in practice and policy. However, I propose that this alone is not adequate grounds to restrict the recruitment of change agents to nursing staff. Change agents recruited from other disciplines (for example therapy staff) may present all the necessary key attributes identified through this research, and be able to provide different insights not available through previous ERP implementation efforts. The use of non-nursing change agents, and the use of distributed change agency, are both worthy of further exploration in future research.

Strategic planning to ensure long-term sustainability remains under-researched, and this research highlights the pressing need to address this. The efforts made to improve initial implementation through evidence-based implementation strategy is increasing, which should result in improved implementation success. However, without some consideration for how these changes might be sustained in the long-term (after the concerted efforts to implement the initial changes, such as an appointed change agent, are withdrawn), there is little to ensure that these changes will persist, and staff behaviour may slowly return to former, more habitual practices. Added to this, high staff-turnover and ward rotation of staff can have negative implications for continuity of newly

introduced practice, as staff new to the ERP ward may have preferred ways of working, be unfamiliar with the pathway and its rationale, and the ERP may face the same barriers to change as it did in its initial introduction (Limb, 2017). Although the change agents involved in my empirical study suggested some tentative ideas for long-term sustainability of the pathway they implemented, they remained pessimistic about the future of the pathway at their sites. After months of planning, concerted effort by staff, and a considerable application of time and resources, ensuring long-term sustainability is a vital, but often overlooked, part of process implementation. The use of ongoing training provisions, regular audits, and distribution of change agency may all present appropriate strategies to promote long-term sustainability of ERPs, but further research is needed to ascertain both their effectiveness, and appropriateness in terms of available resources.

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Appendices

Appendix 1 - Literature Review with Realist Synthesis (published article)

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CLINICAL FEATURE
REVIEW

Implementing enhanced recovery pathways: a literature review with realist synthesis

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ABSTRACT

Objectives: Enhanced Recovery Pathways (ERPs) are an increasingly popular, evidenced-based approach to surgery, designed to improve patient outcomes and reduce costs. Despite evidence demonstrating the benefits of these pathways, implementation and adherence have been inconsistent.

Methods: Using realist synthesis, this review explored the current literature surrounding the implementation of ERPs in the UK. Knowledge consolidation between authors and consulting with field experts helped to guide the search strategy. Relevant medical and social science databases were searched from 2000 to 2016, as well as a general web search. A total of 17 papers were identified, including original research, reviews, case studies and guideline documents. Full texts were analysed, cross-examined, and data extracted and synthesised.

Results: Several implementation strategies were identified, including the contexts in which these operated, the subsequent mechanisms of action that were triggered, and the outcome patterns they produced. Context-Mechanism-Outcome (CMO) configurations were generated, tested, and refined. These were grouped to develop two programme theories concerning ERP implementation, one related to the strategy of consulting with staff, the other with appointing a change agent to coordinate and drive the implementation process. These theories highlight instances in which implementation could be improved.

Conclusion: Current literature in ERP research is primarily focussed on measuring patient outcomes and cost effectiveness, and as a result, important detail regarding the implementation process is often not reported or described robustly. This review not only provides recommendations for future improvements in ERP implementation, but also highlights specific areas of focus for furthering ERP implementation research.

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Enhanced recovery; implementation; realist synthesis; change agency; CMO configuration; context-mechanism-outcome

1. Introduction

Originally developed in Denmark in the late 1990s [1], enhanced recovery pathways (ERPs; also known as enhanced recovery after surgery, or fast-track surgery programs) represent an evidence-based, proactive approach to improving patient surgical outcomes. ERPs address all aspects of patient care throughout their surgery, from preoperative through to discharge and recovery. When successfully implemented, ERPs have been shown to consistently reduce length of hospital stay, and reduce patient readmission rates [2]. As well as these directly measurable benefits, ERPs have a number of secondary benefits as they empower patients and carers to become involved in the pathway of care. Since the early 2000s, ERPs have increased in popularity in the UK National Health Service (NHS) as a means of streamlining surgical procedures, reducing cost, and ultimately improving patient care and outcomes [3,4].

Although the evidence supporting the use of ERPs as a means of optimizing surgical outcomes is continually growing, guidelines and research into the ERP implementation process is limited [5,6]. The focus in current ERP literature is predominantly on the effects the ERP has on patient outcomes, i.e. reducing length of hospital admission, or the impacts of specific elements within the ERP protocol. Limited attention has been paid to the process of implementing ERPs in hospitals, and to what extent they are successfully integrated and adhered to by staff. As the NHS faces severe constraints both to budgets and resources, careful consideration must be given to designing evidence-based healthcare (such as ERPs) that can not only save money but also ultimately improve quality of patient care. An important part of this is ensuring that well-designed programs and interventions are effectively implemented into practice, so that they are correctly executed and have the greatest possible positive impact on hospital processes. ERPs are ward-level protocols which require adherence from staff at all levels in order to be executed effectively.

The introduction of ERPs can often involve a significant change in ward processes, which may be met with some resistance [7–9]. Despite careful consideration given to the design of ERPs, accounts of successful implementation are inconsistent, with postoperative elements of ERPs (such as mobilization and rehabilitation) often suffering low rates of adherence from staff [5,10]. Hospital wards are busy and complex environments, and integrating ERPs with existing practice

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can be challenging. ERPs are often not fully integrated into everyday ward practice. It is unclear in which contexts individual factors aiding or obstructing implementation become relevant, although a wide variety of barriers and facilitators of implementation have been suggested [8,11]. The effectiveness of an ERP is limited by the success of its implementation: unless the pathway is adhered to, it cannot achieve its aims.

The purpose of this review was to identify which implementation strategies result in the successful ERP implementation, by exploring the mechanisms of implementation, the contexts in which these operate, and what outcomes they bring about (developing what are known as context–mechanism–outcome, or CMO, configurations [12]).

A review of the current literature surrounding the implementation of ERPs in the UK involves synthesizing a diverse range of literature concerning a complex intervention in complex settings. As such, it would be impossible for a single causal theory to consistently predict the outcomes of implementing ERPs in different contexts, i.e. different hospitals, different wards within the same hospital, or even the same ward but at contextually distinct times (e.g. different rotation of staff, different times in the year, or several years apart) [13]. Even if a narrower review were conducted exploring the implementation of an ERP within a single surgical speciality, the local context of different hospitals (including organizational, ward-level and individual-level factors) affects the mechanism of implementation, and thereby the outcomes of the ERP.

Systematic reviews are an excellent method of measuring and assessing the extent to which interventions work, but are unable to unpick how, why, in what circumstances and for whom those interventions work, limiting their usefulness in informing the design of future interventions and their implementation strategies [14]. Additionally, existing ERP research is limited and varied in methods used and style of reporting, making meaningful comparison challenging. Because of this, it was agreed that a traditional systematic review approach would be unsuitable. Instead, a realist synthesis approach was adopted [13,15].

Realist synthesis is an increasingly popular method of evidence synthesis, which focusses on the production of program theories in an attempt to explain why, when, how and in what circumstances interventions may or may not work [16]. Systematic reviews aim to minimize bias in order to analyze intervention effectiveness in isolation: realist synthesis accepts that interventions are not isolated mechanisms, but operate within different contexts, which impact outcomes. While systematic reviews are summative, realist synthesis aims to be explanatory, exploring the underlying and interrelated mechanisms of a phenomenon. Realist synthesis aims to consolidate existing research, providing a means of developing and describing underlying program theories by which complex interventions are thought to work. Although not always explicitly stated in ERP design, implementation theory is implicit in the program designers' assertion that, if executed in a certain way, an intervention will result in a desired outcome [15].

By synthesizing a body of evidence and identifying key elements of context, mechanisms and outcomes, researchers generate abstract CMO configurations which explain the data. These can then be tested empirically, and refined where necessary, producing program theory. These theories are not assumed to be absolute, and instead there is an implicit acceptance that they cannot predict every outcome in every context, but pinpoint what works in what circumstances, and identify a number of demi-regularities [15] which can then provide practical guidance for similar interventions in future.

1.1. Review aims

The overall aim of this review was to explore the various implementation strategies used when introducing a new ERP, including what works, for whom, in what circumstances, to what extent, and how. By examining the existing literature, we will identify the mechanisms (M) by which the strategies operate, the contexts (C) in which these mechanisms are triggered, and the resulting patterns in outcomes (O). By reviewing and synthesizing the available literature, we aimed to develop the underlying program theories of ERP implementation, in order to inform future ERP implementation and optimize impact on patient outcomes.

2. Methods

Existing ERP research is limited and varied in methods used and style of reporting, making meaningful comparison challenging. After consideration, we decided that a realist synthesis approach would be the most appropriate for managing an 'uneven body of evidence' such as this [13,17].

To guide the initial search strategy, a number of knowledge consolidation strategies were used. These strategies included an open discussion between the authors regarding our existing knowledge of knowledge translation, organizational interventions and behavior change theories; consultation with field experts and researchers in ERP design and implementation, and a scoping search of existing ERP literature. From this initial stage, we developed initial propositions to be investigated and tested during the data synthesis process, to guide the development of later program theories. The key propositions developed were:

(1) If staff feel valued and involved in the ERP implementation process, then they are more likely to adhere to the pathway in practice
(2) If managers and policy makers develop the ERP and implementation strategy with sensitivity to local context (including staffing levels, resources, organizational structure), the pathway is more likely to be adhered to, and will be sustainable in the long term.

This process was also used to develop the key search terms, inclusion criteria, and guiding questions for the main literature search.

2.1. Search strategy

A search of the literature was conducted, identifying papers dated from 2000 onwards, as ERPs were only introduced in the

UK in the early 2000s (Figure 1). A combination of key words and search terms included enhanced recovery, fast-track surgery, multimodal surgery, implementation, integration, service improvement, national health service, hospital and acute. The search was conducted using databases including EBSCOhost, PsycINFO, MEDLINE and Cumulative Index of Nursing and Allied Health Literature (CINAHL), as well as Google Scholar and a general web search. Hand searching of journals was not deemed necessary due to the age of the research: as ERPs were only introduced in the UK from the early 2000s, any relevant literature will have been published within the last 15 years and therefore accessible via online databases. Reference lists of identified key articles were checked in order to ensure all relevant articles had been included in the review.

2.1.1. Inclusion criteria

Papers were included if they described some aspect of the ERP implementation process, including implementation strategies, barriers and facilitators to implementation, and/or ERP adherence and sustainability. All forms of literature were potentially eligible for inclusion in the review, including peer reviewed journal articles down to case reports and correspondence pieces, as long as the paper discussed instances of ERP implementation. Papers were excluded if they did not either describe the implementation process, the context in which the ERP was introduced, or if implementation was only mentioned briefly (i.e. no detail given about mechanism of implementation).

2.1.2. Identifying candidate papers

Initially, 14 papers which described ERP implementation or adherence were identified for inclusion in the review [2,4,18–28]. Of these, six were original research papers, four were reviews of existing literature, one was a guideline document from the Royal College of Surgeons, one scientific impact paper from the Royal College of Obstetricians and Gynaecologists, one was a focus piece giving advice from experience of implementing ERPs, and the final paper included correspondence concerning a piece of original research (which included more detail about ERP implementation than in the research paper concerned). All of the original research papers reported findings from single-center research projects, and covered a range of surgical specialities (two colorectal, two gynecology/obstetrics, one orthopedic, one urology). All of the papers identified at least one of the implementation strategies described in our a priori propositions.

Reference lists and studies included in the four review papers were checked for relevance, but the majority of these did not contain any additional information related to ERP implementation which had not already been covered by the reviews. However, included in the review by Paton et al. [2] were a number of case studies compiled during a 2011 report by the Department of Health's 'Enhanced Recovery Partnership Programme (ERPP)' [29]. Due to the report's relevance to this review, especially regarding consideration of implementation strategy across multiple sites (the ERPP involved 15 hospitals), this report and three of the original case studies were included in the review (meaning a total of 18 papers were included in the review).

2.2. Data extraction and synthesis

Unlike in a systematic review, publications are not rejected prior to inclusion in a realist review based on a quality appraisal. Instead, each candidate paper is mined for relevant data to further develop the explanatory model [15]. Rather than papers being wholly rejected on the grounds of quality appraisal, the value of each paper is determined by its contribution to increasing understanding and addressing the review objectives. Pawson [15] advises against the use of data extraction forms in realist synthesis, as he argues that their rigid structure can limit the types and breadth of data extracted from a diverse range of sources. Instead, the data were analyzed and extracted iteratively, being constantly related back to the review objectives.

3. Results

3.1. Papers included in review

Each of the included papers made some mention of at least one formal strategy used in the implementation of ERPs. The level of detail in reporting implementation strategy varied, but on the whole was limited, with a strongly outcome-focused approach. None of the papers described a rationale for why a particular implementation strategy was chosen, although the design and content of the ERP itself was described in good detail in most cases. The most commonly used strategies were the tailoring of ERPs to fit local contexts and resources, the use of a multidisciplinary steering group to identify and design necessary changes, regular auditing in order to assess ERP compliance, rolling training programs and the use of an 'ERP champion' or change agent to coordinate and drive the implementation process. Some of these strategies were interdependent (for example, the change agents conducting the audits, the training program agreed via a multidisciplinary working group, ERP tailoring discussed with the multidisciplinary working group or via change agent consultations with ward staff), and as such we analyzed the data in detail, to synthesize the findings and develop CMO configurations which were s (Table 1).

The majority of papers discussed the involvement of stakeholders in the ERP design and implementation process. The format of these varied, with some reporting the setup of multidisciplinary working groups or project teams [18,20–22,25,26,30–32] in order to contribute to the development of the pathway and agree the ERP goals. Stakeholder consultation served to cement existing team relationships and integrated working [20], provide opportunities for cross-disciplinary education, improve communication, and help staff to gain greater insight into the rationale and evidence base behind ERP elements (thus reducing resistance to change) [21,22]. One paper recommended consultation with a broad range of staff [33], not only a small, specifically selected core working group, in order to foster positive

Table 1. Summary of papers included in review.

	Authors	Date	Journal	Methods/setting/sample/brief summary	Key findings (implementation specific)
[2]	Paton F, Chambers D, Wilson P, et al.	2014	BMJ Open	Rapid evidence synthesis of 8 databases 1990–2013, assessing effectiveness and implementation of ERAS program; UK settings. 17 systematic reviews and 12 RCTs included.	Barriers to ERP implementation: resistance to change from patients and staff; lack of funding and support from management; staff turnover; poor documentation and lack of time to complete documentation; 'other practical issues.' Facilitators for ERP implementation: dedicated project lead to coordinate and sustain pathway; multidisciplinary approach; continual education of staff
[4]	Slater R	2010	Br. J. Nurs.	Article outlining the key elements of ERP; review of current literature	Highlights the need for resources to fully implement an ERP, including time to educate staff appropriately. Estimates a 12–18-month delay period for impacts of ERP to be fully realized. Nurse facilitator to coordinate implementation seen as a requirement. Emphasizes that all aspects of ERP should be understood by all members of multidisciplinary team to enable implementation
[18]	Rooth C, Sidhu A	2012	Br. J. Nurs.	Description of ERP implementation experience – gynecology unit, London tertiary referral center, September 2010. ERP coordinated by dedicated ERP Nurse Practitioner. Multidisciplinary working group met monthly. Regular teaching sessions given to staff to aid understanding of ERP and rationale.	Some issues with compliance identified with certain staff groups – notably domestic staff (involved in postoperative/recovery arm of ERP). Authors highlight the need for all staff groups to have insight and understanding of ERP. Multidisciplinary working and ERP Nurse Practitioner identified as essential to successful ERP implementation. Changes in staffing and maintaining motivation identified as barriers to ERP success.
[19]	Lee D, Haynes C, Deans G, et al.	2011	J Eval Clin Pr.	Description of ERAS introduction – UK district general hospital, patients undergoing elective colorectal surgery, research conducted February 2008 – April 2009. No specific details given regarding method of ERAS implementation.	Challenges: evidence base limited for certain aspects of pathway, lead to difficulties in getting full support from clinical staff; changes to current practice proved challenging; 'complex relationships between organizations, professionals, patients and carers.' Authors advise that ERAS implementation should be tailored to culture and values of the organization; reward and recognition should be utilized as motivators for change.
[20]	Billyard ., Boyne S, Watson J	2007	Gastrointest. Nurs.	Description of ERP implementation at Torbay Hospital (500-bed district general hospital in South West England); specialist registrar with ERAS experience; experienced colorectal surgeon championed project; strong project team, with matron coordinating and leading; stakeholders invited to be involved as needed; educational opportunities utilized as needed	Facilitators for ERP implementation: positive team approach; agreed care pathway; strong leader with project management skills; continual learning & training Authors note that a PPI event would have been useful to inform development of patient information leaflets.
[21]	Meale PM, Cushion J	2010	Curr. Anaesth. Crit. Care	Commentary piece on ERP design and implementation	Facilitators for ERP implementation: development group including key stakeholders; literature search of current evidence; group decision-making reprogram goals; stakeholder analysis (who will be affected by project); meet with wider staff involved with ERP; establish implementation group; develop/tailor ERP document; manage change resistance; highlight benefits of ERP; monitor compliance and outcomes Barriers to ERP implementation: resistance to change; staff failing to engage with process; ambiguous information
[22]	Torbé E, Crawford R, Nordin A, et al.	2013	Obstet. Gynaecol.	Review of UK gynecological ERP research	Barriers to ERP implementation: habitual behavior which favors familiarity over evidence; Facilitators for ERP implementation: stakeholder involvement (from all staff groups); appropriate training; ERP champion to facilitate process; locally agreed pathway; monitoring and audit of compliance and outcomes;
[23]	Khan S, Gatt M, Horgan A, et al.	2009	Assoc. Surg. Gt. Britain Irel.	Guideline document for ERP implementation (despite title of document, practical guidance for implementation strategy is limited – focus is primarily on development of ERP components)	Facilitators for ERP implementation: regular audit of ERP adherence and outcomes; continuous staff education; multidisciplinary team approach; ERAS champion to coordinate process
[24]	Ahmed J, Khan S, Lim M, et al.	2012	Color. Dis.	Systematic review of ERP compliance and variations in practice – 14 studies included in review	Issues identified: none of the studies reviewed were fully compliant to the ERP protocol, postoperative components particularly suffered. Authors suggest this may be due to the inheritance of obsolete practice from traditional mentor–student relationships. Facilitators for ERP implementation: stakeholder involvement from all staff affected by ERP; staff 'buy-in' to the ERP; ERAS champion to lead the process; regular audit and dissemination of findings

(*Continued*)

Table 1. (Continued).

	Authors	Date	Journal	Methods/setting/sample/brief summary	Key findings (implementation specific)
[25]	Crawford RAF, Acheson N, Nordin AJ, et al.	2013	R. Coll. Obstet. Gynaecol.	Scientific impact paper consolidating existing research into ERP in gynecology	Facilitators for ERP implementation: input, engagement and commitment from all staff affected by ERP; core team of stakeholders (multidisciplinary) to coordinate process; ongoing education; staff understanding their role within the pathway; locally agreed pathway; clear documentation; ongoing data collection.
[26]	Wrench IJ, Allison A, Galimberti A, et al.	2015	Int. J. Obstet. Anesth.	Description of ERP implementation experience at tertiary care center for patients undergoing elective cesarean section; ERP locally designed by multidisciplinary team and introduced 2012; initiatives introduced to encourage uptake; guideline documents developed.	Facilitators for ERP implementation: close multidisciplinary working; effective team management; information and education.
[27]	Smith J, Meng ZW, Lockyer R, et al.	2014	BJU Int.	Description of ERP implementation experience at University Hospital Southampton for patients undergoing radical cystectomy; retrospective study of 133 patients between October 2008 and April 2013 (non–ERP patient group (n = 69), ERP–1 group (n = 37) and ERP–2 group (n = 27)).	Facilitators for ERP implementation: ongoing education for all staff groups; strong team–working involving all staff groups.
[28]	Wainwright T, Middleton R	2010	Curr. Anaesth. Crit. Care	Overview of ERP and description of an orthopedic ERP implementation experience at an NHS district general hospital (Royal Bournemouth); first introduced 2007; pathway redesign was consultant surgeon and pathway manager led	Barriers to ERP implementation: complex staff and organizational issues associated with introducing change. Facilitators for ERP implementation: specific training; strong clinical and managerial leadership; team approach; standardized procedures; organized logistical framework; commitment to change and improve patient care
[29]	Department of Health	2011	Enhanced Recovery Partnership Programme	Report outlining multi–site initiative, experiences of implementing ERPs; overview of experiences of sites involved	Facilitators for ERP implementation: ERP champions; raising awareness & engaging staff motivation; standardized processes; integrated and stable multidisciplinary team.
[30]	Abell D, Long O, Skelton V, et al.	2013	Int J Obs. Anesth	Correspondence piece commenting on recent research into ERP implementation	Facilitators for ERP implementation: build on existing practice in order to minimize disruptive change; representatives from all staff groups involved in multidisciplinary team to discuss how to apply ERP in practice; staff feel they have adequate input into ERP design and implementation process; utilize existing resources to minimize cost and demand on staff; staff understand the benefits of the ERP
[31]	Mount Vernon Hospital	2011	Enhanced Recovery Partnership Programme	Part of the Enhanced Recovery Partnership Programme [30]. Case study describing experience of introducing musculo-skeletal ERP. Desire to emulate evidence-based practice observed in USA & Denmark.	Embedded and standardized ERP elements Facilitators for ERP implementation: multidisciplinary ERP team; standardized practice of staff; endorsement from senior management; familiarity with evidence base; appoint ERP champion; critically appraise practice ongoing; regular multidisciplinary meetings; regular research and audit. Barriers to ERP implementation: reluctance of senior clinicians to change practice; reluctance of patients to adopt new practice
[32]	Royal Berkshire Hospital	2011	Enhanced Recovery Partnership Programme	Part of the Enhanced Recovery Partnership Programme [30]. Case study describing experience of introducing musculo–skeletal, colorectal, urological and gynecological ERPs. Trust had some previous ERP experience but this hadn't been sustained.	Facilitators for ERP implementation: board approval and engagement; multidisciplinary approach; steering group with regular meetings; ERP project lead to coordinate process; engagement of ward staff; regular audit and data collection; education Barriers to ERP implementation: some resistance to change from surgical and nursing staff; initial lack of ERP nurse/champion; patients resistant to change
[33]	Medway NHS Foundation Trust	2011	Enhanced Recovery Partnership Programme	Part of the Enhanced Recovery Partnership Programme [30]. Case study describing experience of introducing musculoskeletal, colorectal, urological and gynecological ERPs.	Facilitators for ERP implementation: involvement of all staff groups affected by ERP; positive attitude Barriers to ERP implementation: lack of funding & resources; documentation not being used appropriately

attitudes toward the pathway and gain a greater understanding of all aspects of the surgical pathway.

However, some papers reported little or no stakeholder involvement in the design and implementation process, but it is unclear whether or not this is simply due to a lack of detailed reporting. For example, Lee et al. [19] do not mention stakeholder involvement in ERP design or implementation, but in their concluding comments, they discuss the importance of staff involvement in the change. Likewise, although Ahmed et al. [24] do not directly discuss working groups in the design of the ERP, they discuss the role of stakeholder 'buy in' to the ERP model, in order to challenge obsolete practice, and highlight the importance of good multidisciplinary working throughout the pathway.

Although the majority of papers reported some level of stakeholder consultation, one consistent observation was that this rarely involved therapies staff, healthcare assistants or support workers (i.e. staff primarily involved with patients' postoperative care and recovery). The main focus of ERP design and implementation involved consultation with pre- and intraoperative staff, such as surgeons, anesthetists, and nurse specialists. The postoperative stage suffers the lowest adherence rate across ERPs [23,24] and Lee et al. [19] suggest this may be due to postoperative care staff preferring traditional methods of care, or viewing these as 'kinder' to patients (e.g. meals in bed, rather than encouraging mobilization to eat in a dining room). This highlights the importance of identifying areas of non-adherence, in order to target ongoing staff training, and increase awareness and understanding of the rationale and evidence base behind ERP elements.

The majority of papers discussed the importance of the role of a change agent (such as an Enhanced Recovery Nurse Practitioner, or ERP champion) in driving the ERP implementation process [2,4,18,20–23,29,31,32]. This role was usually occupied by a member of nursing staff, often recruited from existing ward nurses, but guidelines suggest that this role could be filled by staff from other specialities [23] (although this is not supported by existing evidence). One possible explanation for the success of using nurses as ERP champions in driving the ERP agenda is a good working knowledge of hospital nursing practices, and an existing rapport with staff (particularly true if the change agent is recruited internally). One of the papers did not appoint a change agent (due to lack of financial resources), but did suggest that had this been possible, this may have helped in the management of the pathway, increasing compliance and improving communication [19]. Generally, the role of change agent involved close communication with the multidisciplinary team, provided a main point of contact for both staff and patients, was responsible for ongoing ERP adherence audits [27], identifying and delivering ongoing training needs [4].

Staff in role of ERP change agent often did not have previous experience in this role, or of ERPs in general. To help develop the change agent's understanding of ERPs and inform their strategies for implementation, one of the change agents was given the opportunity to visit a ward with an already established ERP [18]. Although the unit visited was of a different clinical speciality to the change agent's own ward, this provided not only an opportunity for change agents to gain insights into the ERP implementation process (and inherent challenges), but also gave the agent a professional contact with significant experience and expertise, who could serve as a source of advice and support.

The use of a change agent to drive the implementation process should be distinct from over-reliance on this one individual, to the detriment of the overall life of the ERP. Rooth & Sidhu [18] observed a significant drop in ERP adherence during the change agent's period of annual leave, suggesting that appropriate and effective cross-cover of this role is vital for long-term sustainability and fidelity to the ERP.

3.2. Developing program theories

Following analysis and synthesis, two program theories were developed, encompassing a number of dependent CMO configurations. These theories were concerned with staff consultation and the use of a change agent in ERP implementation. Based on the extracted data, the desired outcomes of successful implementation were identified, and these were then tracked back to identify the mechanisms resulting in such outcomes, and the contexts necessary to trigger them. The literature was iteratively analyzed on multiple occasions to extract any further relevant details, and from these we developed of CMO configurations. This was by identifying demi-regularities in the literature, examining outcome patterns and the conditions surrounding them. The extracted data was then synthesized to draw out the essential characteristics common to the implementation processes. These formed the basis of the initial CMO configurations. After the initial CMO configurations were developed they were compared with the source literature, tested, and refined as necessary. Figure 2 shows an outline of the CMO configurations developed as part of the 'staff consultation' program theory.

Staff consultation is hypothesized to work best when staff *feel valued and supported* both by their managers and by their colleagues, *have trusting and respectful interdisciplinary relationships*, and there are *opportunities for staff to contribute to multidisciplinary discussions* (context); this facilitates *open discussion between different staff groups* (mechanisms); as a result, this allows for *identification of practical barriers to ERP implementation*, how these barriers might be realistically managed, and results in *improved pathway adherence* (outcome).

The current literature concerning ERPs is heavily outcomes focused (adherence levels and patient outcomes), and has minimal detail about the implementation process (e.g. specifically who was involved in staff consultations, the level of involvement, the types of discussions conducted). This lack of detail makes it challenging to identify whether the process of implementation could relate, positively or negatively, to the outcomes achieved. Using the CMO configurations developed in Figure 2, it may be possible to speculate. For example, if certain staff groups are simply not invited to be involved in the consultation process, these staff do not have *opportunities to contribute to the multidisciplinary discussion* (context), meaning that the mechanisms of *open discussion between staff groups* and *staff communicate effectively within & between teams* may not be triggered. As a result, the extent to which *staff feel involved and invested in the ERP*, are *able to support*

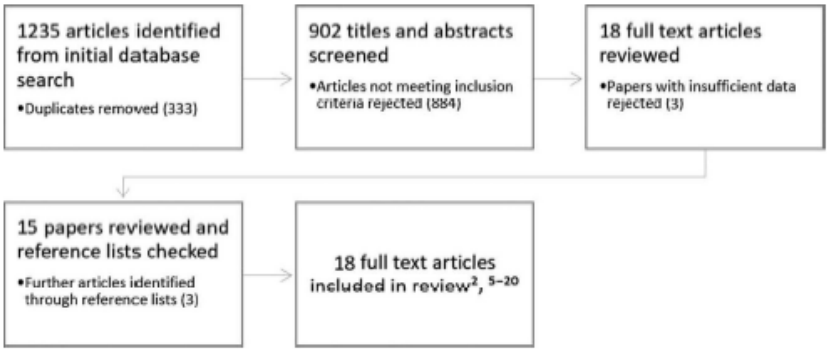

Figure 1. Search strategy.

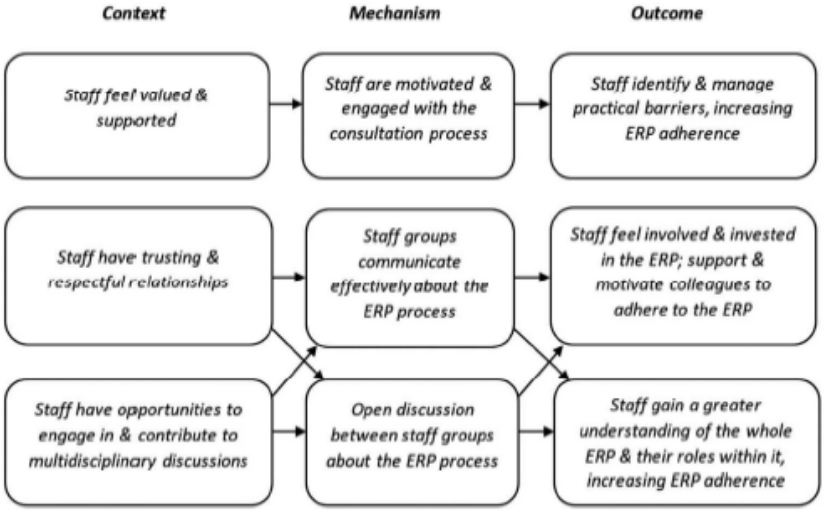

Figure 2. CMO configurations within programme theory of staff consultation.

and motivate colleagues, and *understand the whole ERP and their roles within it* (outcomes) may be affected, thereby affecting ERP adherence.

Alternatively, certain staff groups may not *feel valued or supported* (context), which results in these staff not feeling *motivated or engaged in the consultation process* (failure to trigger mechanism), as a result, some *practical barriers fail to be identified and addressed* (desired outcome not achieved), and staff are unable to adhere to the ERP.

In the articles reviewed, not all of the elements, in the ERPs described, are adhered to fully. Commonly, postoperative elements related to mobilization, rehabilitation, and pain management, often demonstrate much lower levels of adherence than other stages in the ERP. However, based on this evidence, reasons for why this is the case is not clear. We hypothesize that this is in part due to the fact that this phase primarily involves therapies staff, healthcare and nursing assistants, who are often not involved in policy design and staff consultation. The earlier phases of ERPs, which involve staff nurses, surgeons and anesthetists, do not typically have adherence issues. It is possible that not all relevant staff groups are equally valued, or represented in the consultation process, which results in a lack of understanding of the pathway and its rationale, and as a result these staff lack the necessary skills, knowledge, or motivation required to implement the ERP appropriately. However, in order to explore this hypothesis further, more detail is required regarding the context of implementation and its impact on how mechanisms operate. Another potential issue is frequent turnover of staff, or the use of agency staff, who may not be familiar with the ERP or its evidence base, highlighting a need for ongoing and rigorous training.

Figure 3 shows the CMO configurations concerned with the 'change agent' program theory.

Appointing a change agent/ERP champion is thought to work best when the change agent is *familiar with existing local practices*, has a *detailed understanding of the ERP and its rationale/evidence base*, has *good management skills*, and *rapport with a broad range of staff* (context). This enables the change agent to *drive the implementation process on the ground*,

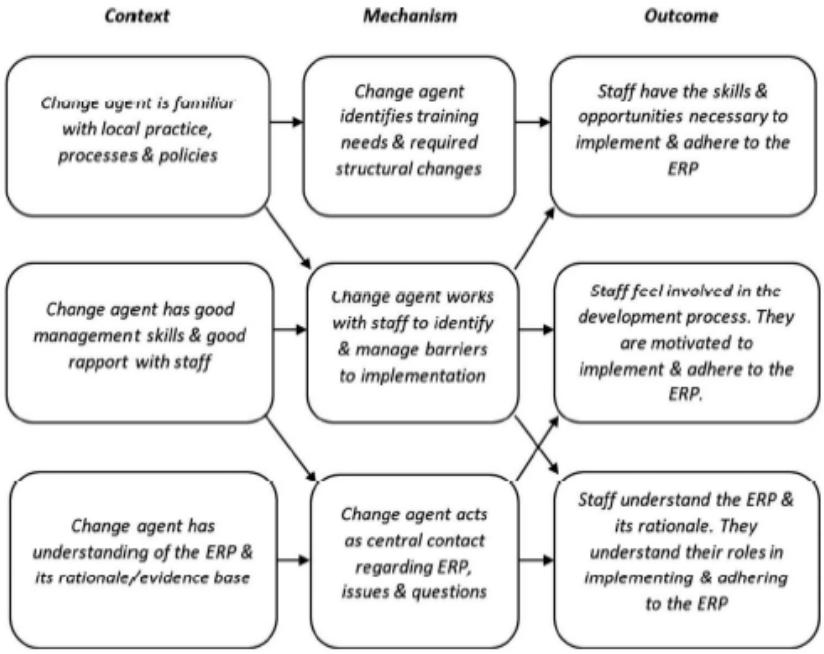

Figure 3. CMO configurations within programme theory of change agency.

acting as a *main point of contact* to resolve ongoing issues, *identify areas for development* such as skills training needs, and *liaise directly and effectively with staff* to problem solve regarding barriers to implementation, generating *positive attitudes toward the ERP* (mechanisms). The outcome of this engagement in *increased staff understanding* of the ERP, *reduced resistance to change* and *improved staff adherence* to the pathway (outcomes).

Papers which discussed the use of a change agent in the ERP implementation process emphasized the importance of this role to develop good communication and cohesion. Studies not using a change agent reflect that the process could be greatly improved had one been employed. However, this not without issues, as it requires an individual who has specific preexisting skills and knowledge, to undertake a personally and professionally demanding role. Additionally, the change agent should be effective in sharing those skills and knowledge throughout the team, as overreliance on one individual to ensure the smooth running of an entire pathway can result in noticeable dips in adherence should that individual be removed [18].

4. Discussion

This review highlights the importance of a planned and well-coordinated process of implementation, in which members of all staff groups across the pathway are supported, informed, and enabled to implement the necessary changes to practice. This is reflected in the wider implementation research literature [34,35]. Regardless of surgical speciality, a theoretically based and planned process of implementation results in sustained ERP adherence (and subsequent improved outcomes for patients).

Implementation strategies analyzed in this review were variable with variable results. Although the implementation process was not the primary focus for the original articles, it is important to emphasize that the aims of an intervention can only be achieved if it is implemented appropriately [5]. If implementation strategies are not prioritized and considered carefully, this can limit the effectiveness and sustainability of the intervention, and this is reflected in the wider international ERP literature [36–38]. None of the papers described rationale for why strategies for implementation were selected, which suggests either a lack of reporting detail, a lack of evidence, or theory-based implementation.

It would be short sighted to consider any program theory complete. The lack of detail available made the process of developing CMO configurations challenging, as often important contextual information was absent. Although outcomes and mechanisms were relatively straightforward to identify, contexts often had to be inferred. Although these were later refined and proved to be robust in relation to the existing literature, the current program theories would benefit from further development. Current work will use insights from this review to produce new details regarding ERP implementation in a specific context allowing more nuanced development of the program theories.

4.1. Strengths and limitations

The quality of a review is often limited by the primary literature upon which it is based. For the purposes of this review, only literature discussing ERPs in UK hospitals was included. Implementation strategy is context sensitive, and national

context has a significant impact on how healthcare is delivered, managed and evaluated [39]. We decided that broadening the review to include the wider international literature would result in a loss of contextual specificity and therefore render the review less meaningful. Given the findings from this review, a further comparison with international literature may provide additional insights and transferable concepts.

Studies describing the ERP implementation process are limited, and the description of implementation is often brief, lacking important detail. Current reporting of ERP implementation has an overwhelmingly outcome-focussed approach, limiting the transferability of findings to other contexts, as it is challenging to identify what circumstances are needed to trigger specific mechanisms to produce the desired outcomes (i.e. ERP fidelity and sustainability).

It is possible that a different group of researchers conducting a realist review addressing the same aims may select different datasets for inclusion in their review, make different judgments about the data, highlight different areas of significance, categorize the contexts, mechanisms and outcomes differently, and subsequently develop different program theories. However, this is true of any realist synthesis, and only further demonstrates the complexity of this research [13,40].

5. Conclusion

The program theories proposed from this review are in their early stages of development. This review has highlighted important issues in the implementation, and subsequent reporting of ERPs. We anticipate the findings will be useful in assisting hospital administrators and clinicians to design appropriate and effective implementation strategies. By proposing these program theories, we would encourage other researchers to test them as part of future ERP implementation research. By reporting how implementation varies between different settings, further development and refinement of implementation theory can occur.

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Declaration of interest

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Appendix 2 – Participant Information Sheet

Annex 10

TRUST LOGOS TRUST LOGOS TRUST LOGOS

Participant Information Sheet

perfected project
Peri-operative Enhanced Recovery Hip Fracture Care Of Patients With Dementia

Exploring the implementation of the PERFECTED ERP (PhD study)

This leaflet contains an invitation to take part in a study being undertaken by a PhD researcher from the University of East Anglia (UEA), as part of the PERFECTED research programme. It tells you why the study is being done and what it would involve for you. Please read it and if you wish, discuss with others, so that you can decide whether or not you would like to express an interest in taking part. Take your time in making your decision. This information sheet is yours to keep.

Study contact details:
PhD researcher: Mrs Astrid Coxon
Norwich Medical School, UEA
Email: a.coxon@uea.ac.uk

Supervisor: Prof Chris Fox
Tel: 01603 59 3583
Email: chris.fox@uea.ac.uk

V1 02.12.2015 PhD Study: PIS

What is the purpose of this study?

Hip-fracture is a growing problem for the UK. The condition has a significant impact on the health and independence of patients and their families. This study aims to explore what aids and obstructs the introduction of a new Enhanced Recovery Pathway (PERFECT-ER) for hip-fracture into a busy hospital environment, and how staff experience this. It is part of a larger programme of research called PERFECTED, see www.perfected.ac.uk for further information.

Why have I been chosen?

You have been given this invitation because you are a Service Improvement Lead involved in the implementation of PERFECT-ER.

Do I have to take part?

No. It is up to you to decide. Your decision about whether to take part in the study will have no adverse consequences.

What will happen to me if I take part?

Should you agree to take part, the PhD researcher will ask you to sign a consent form. This means you agree to take part in three research interviews over the PERFECTED WP2 12-month study period (at the beginning, mid-point, and end of the study period).

Each interview is expected to last 30-60 minutes, and will be held at a time and location convenient to you.

The interviews will be audio-recorded, and transcribed verbatim by the phD researcher.

Once recruited onto the study you will be given a unique code / pseudonym. Your name and any personal details will NOT be used.

What are the possible risks or disadvantages in taking part?

The main disadvantage is inconvenience. We recognise that individuals in your role are time pressured, and as such any research activities conducted by the PhD researcher will be agreed with you in advance, and conducted at a time and place convenient to you.

What are the possible benefits of taking part?

There are no direct benefits. It could be of personal interest to you to share your opinions and experiences of implementing new interventions or ways of working. The information obtained from the study as a whole is expected to lead to future improvements in hospital care for hip-fracture patients living with dementia.

What will happen if I don't want to carry on with the study?

If you do decide to take part in the study, you still can change your mind. Nothing detrimental will happen to you and you do not need to provide a reason. But please be aware that any data you had provided up until the time you decide to withdraw will still be kept and used.

What if there's a problem?

If you have concerns about any aspect of the study, please feel free to discuss the matter with the PhD researcher. If you remain unhappy you should contact Professor Chris Fox (PhD supervisor), whose contact details are provided at the front of this leaflet.

Will my taking part in the study be confidential?

Your contributions to this research project will be anonymous and not traceable back to you.

Any anonymous data which you contribute will be stored securely in line with the Data Protection Act (1998) for 15 years and then destroyed. The only time that we would pass on information would be if you disclosed information that lead us believe that you, or someone else, was at risk of serious harm.

How will the results of the research study be used?

The results of this study will interest many different people and organisations, including a PhD thesis. To help the research we may use quotes from you. If we do so, we will not use your real name and your quote will be in no-way traceable back to you.

Who is organising/funding the study? Who has reviewed it?

This PhD project is being funded by a UEA Faculty of Medicine & Health Sciences studentship award.
The PERFECTED study is funded by the National Institute for Health Research (NIHR).

The Chief Investigator for the PERFECTED Programme is Professor Chris Fox, a Consultant Psychiatrist based at UEA. This particular study has been reviewed and approved by the UEA Research Ethics Committee, and by the South-Central Oxford C Research Ethics Committee (as part of PERFECTED WP2).

Want to know more about the study?

If you have any questions about this study or about PERFECTED, please do not hesitate to contact one of the following:

The PhD study:
Mrs Astrid Coxon
Norwich Medical School, University of East Anglia, Norwich, NR4 7TJ
Email: a.coxon@uea.ac.uk

PERFECTED:
Prof. Chris Fox
Norwich Medical School, University of East Anglia
Norwich, NR4 7TJ
Tel: 01603 59 3583
Email: chris.fox@uea.ac.uk

Appendix 3 – Participant Consent Form

Trust Logo

Consent Form

Title of Study: Exploring the implementation of the PERFECTED ERP (PhD study)

PhD Researcher: Astrid Coxon

	Please initial box
1. I confirm that I have read and understand the information sheet dated **xxxx** (version **xxxxx**) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my legal rights being affected.	☐
3. I understand that my profession and banding may be shared with researchers where it is relevant to my taking part in this research. I give permission for these individuals to have access to this information.	☐
4. I understand that study interviews will be audio-recorded, transcribed verbatim and analysed for the purposes of research.	☐
5. I understand that all information will be anonymised by the allocation of codes and pseudonyms and that information will remain confidential and only be used for research.	☐
6. I agree to take part in the study.	☐

Name of participant	Date	Signature
Name of person taking consent	Date	Signature

When completed: 1 for participant; 1 for researcher site file

Appendix 4 – Initial ethics application (submitted to UEA REC 15/10/2015)

UNIVERSITY OF EAST ANGLIA
FACULTY OF MEDICINE AND HEALTH SCIENCES
RESEARCH ETHICS COMMITTEE
Application Form for Ethical Approval of a Research Project

Please refer to the guidelines when completing this form.
This document should help members of the FMH Ethics Committee understand the objectives of your project/research and the procedures to be conducted.
It is ESSENTIAL that you use non-technical language that can easily be understood by non-specialists and lay members of the Committee, and all applications need to include all relevant documents.
It is not acceptable to refer the committee to a protocol, and the information on the application, together with the attachments, should be sufficient to allow the Committee to form an opinion.
Forms may be reviewed by the Chair and will be returned to you if you do not meet these requirements. This will delay approval of your application as applications cannot be accepted after the deadline.

*Does the project involve the use of **drugs, or testing of new equipment**, or research on **NHS patients**?* ~~YES~~/NO
*(If YES, it **MUST** be referred to an NHS Research Ethics Committee for approval)*

Does the project involve the use of Human Tissue? ~~YES~~/NO
(If YES, it must be referred to the Faculty of Medicine and Health Sciences Research Ethics Committee)

Is the project a Service Evaluation? ~~YES~~/NO
(If YES, it must be referred to the Faculty of Medicine and Health Sciences Research Ethics Committee with evidence of acceptance by the relevant NHS Trust)

Is the project an Audit? ~~YES~~/NO
(If YES, it must be referred to the Faculty of Medicine and Health Sciences Research Ethics Committee with evidence of acceptance by the relevant NHS Trust)

1. Name of applicant: …ASTRID COXON……..
(Block letters)

2. Academic address for correspondence: …NORWICH MEDICAL SCHOOL, UNIVERSITY OF EAST ANGLIA, NORWICH……

……Post code: NR4 7TJ..

3. Tel No: …07974257913….. Fax No: ……..

4. E-mail address: …A.COXON@UEA.AC.UK……..

5. School (AHP, MED, NSC): …MED……

6. Status of applicant (Staff, UG or PG student - and year of course): ….PGR, 1ST YEAR..

7. If Student:
Is this study being carried out to fulfil a required part of your course? Yes/~~No~~

If No:
Please confirm contact details of supervisor

N/A.

Name of supervisor: .....

8. Has this application gone to an Ethics Committee elsewhere? ~~Yes~~/No

If YES, please indicate where and include copies of correspondence:

N/A.

Please send 16 copies of the application form, proposal and any other documents (please ensure all documents are fixed together in the top left-hand corner) to: *FMH Research Ethics, Research & Enterprise Office, SCI Building, Room 0.03,* University of East Anglia, Norwich NR4 7TJ; **plus an e-mail copy to fmh.ethics@uea.ac.uk on or before the deadline shown on the following intranet page.** (https://intranet.uea.ac.uk/foh/intranet/ethics-committee).

For any queries telephone: 01603 591720

Project details (please could sections 9, 10 and 11 be limited to a maximum of 3000 words.

9. Full title:
Implementing an Enhanced Recovery Pathway for hip fracture patients with dementia: Exploring barriers and aids to training transfer in acute hospital settings

10. Purpose of project:

Background

Hip fracture

Every year in the United Kingdom, approximately 65,000 people fracture their hip, necessitating surgery [1]. Of these, it is estimated that over 40% have dementia or some form of cognitive impairment [2], [3]. In persons with dementia (PWD), surgical outcomes are much poorer, with extended hospital stays, protracted recovery times and greater incidence of post-operative complications [4], [5].

Acute hospital dementia care

A need for explicit care pathways for patients with dementia was identified in the Prime Minister's Challenge on Dementia [6], a view supported by the Royal College of Psychiatry [7]. As both hip fracture and dementia occur most commonly in elderly patients, improving care pathways for these patients is of paramount importance in an aging population. In response to this need, the PERFECTED (Peri-operative Enhanced Recovery hip fracture Care of paTiEnts with Dementia) Applied Research Programme was set-up. PERFECTED is a five-year National Institute of Health Research (NIHR) funded programme which aims to develop an Enhanced Recovery Pathway (ERP) to improve acute hospital care for hip fracture

patients with dementia. The PERFECTED programme will achieve this through expert consultation, a feasibility study, and ultimately a pilot of the pathway across ten NHS hospitals. The feasibility study is Work Package 2 (WP2) of PERFECTED, and the present PhD study will be conducted alongside this.

Enhanced Recovery Pathway

Originally referred to as "fast-track surgery", ERPs were developed by Denmark in the late 1990s [8]. ERPs are evidence-based approaches to improve patient care and recovery following major surgery, and there is good evidence to support their use over usual clinical care [9]–[11]. A growing number of hospitals have ERPs in place for a range of surgeries, including cancer-related procedures such as mastectomy, hysterectomy and colorectal surgery. The use of ERPs to improve patient outcomes following hip surgery is on the rise [12]–[14], but these are still rare, and current evidence is not of sufficient quality to determine how best to care for hip fracture patients who also have dementia or other cognitive impairment. Smith et al.[3] highlighted that no existing care pathway has been specifically designed to meet the needs of PWD. The PERFECTED ERP aims to meet this need, by developing and piloting an evidence-based ERP protocol to improve outcomes for PWD who undergo hip surgery.

Hospital wards are complex environments, with staff from various disciplines concerned with different aspects of care and priorities, and as such facilitating change can be challenging. ERP protocol implementation and adherence is often met with a number of barriers which can be difficult to overcome, as they are often context specific [15], [16]. However, certain elements are common across settings (such as low self-efficacy, lack of motivation, and poor team-working [16]–[18]), and strategies such as appropriate training of staff can improve adherence [15], [18]. Staff training provides an opportunity to not only train correct use of the ERP, but also to explain the evidence and rationale behind its use, and highlight the potential benefits of this approach, both for staff and for patients.

Implementing new training is also not a straightforward process however and queries have been raised as to the efficacy of expensive training programmes within UK healthcare. Currently, approximately £5 billion is spent annually on NHS training and education [19] but the actual impact this spending has on staff skills and subsequent patient care is unknown. Even when training is meticulously designed and delivered, this is no guarantee that skills and knowledge gained will be applied in the workplace, i.e. that training will be transferred [20], [21]. This issue is commonly referred to as the "transfer problem".

Transfer of training

The term "transfer of training" (or "training transfer") refers to the extent to which skills and knowledge learned in a training environment are implemented into everyday working practice. Successful transfer of training relies on more than a well-designed training programme, delivered appropriately. One of the most popular models of training transfer [22] highlights the role of trainee characteristics and the work environment as key factors in the successful transfer of training: these factors play important roles in ensuring that training makes a meaningful difference to practice [23].

Relating this to the context of the PERFECTED ERP, the dynamics in multi-disciplinary ward teams, as well as the attitudes and prior experience of staff, have significant impacts on the successful implementation of an ERP protocol [18], [24]. Where training fails to transfer due to a specific factor, such as lack of management support, no opportunity to use trained skills,

or low trainee motivation, these factors are called "barriers to transfer" [25], [26]. Existing training transfer literature suggests that these barriers can be managed at least in part by involving trainees in training design, making training flexible to individual needs, and responding to trainee queries and concerns through timely feedback [27], [28].

During WP2 of the PERFECTED research programme, the PERFECTED research team will work collaboratively with hospital staff and stakeholders using an action research approach to understand how best to implement the ERP through effective staff training. WP2 aims to explore how staff respond to the ERP being introduced into their wards, as well as how and why the ERP becomes (or not) embedded into practice. Key to this process are the Service Improvement Leads (SILs), who will act as co-researchers and active participants in this change process, facilitating change from within the ward environment. One SIL has been appointed at each partner hospital as seconded members of NHS staff; they will be responsible for implementing the PERFECTED ERP on their ward, and collect real-time evidence of the implementation process.

The SILs will play an integral part in the successful transfer of training, as their role within WP2 will give them insight into trainee characteristics and factors of work environment which might present barriers to transfer of the ERP training. As such, SILs will present a unique insight into this process, not only from a professional perspective in terms of managing the implementation process and the potential barriers this presents, but also the personal challenges they may face managing both their role as co-researcher and research participant. SILs will also be able to give a rich account of the variety of strategies employed to manage these barriers, and to what extent these are successful in promoting training transfer.

As a PhD research project attached to PERFECTED, the present study will focus on the design and implementation of the ERP training, and the role of the SILs in this implementation process. It will explore how SILs navigate the change environment, liaise with ward staff and UEA researchers, design and implement ERP training in a contextually appropriate way and conceptualise barriers and aids to training transfer.

Aims

This study aims to:

- Provide a rich description of the ERP implementation process, including the barriers and facilitating factors which affect training transfer, as experienced by the SILs
- Compare and contrast these experiences of ERP implementation between the three WP2 partner sites

From these aims, the following research questions have been developed:

- What do SILs expect from a new Enhanced Recovery Pathway for hip fracture patients with dementia?
- What do SILs believe might aid or obstruct ERP implementation?
- How do these expectations change over the course of the WP2 process?
- How do SILs experience and make sense of this process?

11. Methodology, Procedure and Analysis:

The researcher for this study is a PhD student attached to PERFECTED WP2. Data for the PhD study will be collected concurrent with WP2, over a 12-month action research period. The WP2 research activities are detailed in the PERFECTED research protocol. In addition to WP2-generated data, the present PhD study will also audio-record the optimising care sessions for in-depth qualitative analysis, and conduct individual interviews with SILs at three separate time points.

To give an overview of the research process, a table outlining all research activities and how they will be conducted is given below.

	Ethnographic research	Ward audits	Optimising care sessions	Interviews with SILs
PERFECTED WP2	Observations & interviews; SILs fieldnotes	Checklist, conducted by SILs	Ward team discussion; SILs fieldnotes	N/A
PhD study	Analysis only	Analysis only	Audio-record & transcribe; analysis	Individual, face-to-face, audio-record & transcribe; analysis

Inclusion Criteria

NHS employee or student nurse
Involved in the delivery of care to patients in partner wards in which the PERFECTED ERP is being implemented

Exclusion Criteria

None

Recruitment and consenting

RECRUITMENT: The SILs from the three partner hospitals will be approached via email by the PhD researcher, giving information about the nature and aims of the PhD research project (annex 4) and an invitation to take part in individual interviews. For those SILs expressing interest in participating, a mutually convenient meeting time will be arranged.

CONSENT: Participants will be consented as part of PERFECTED WP2.

Procedure

Optimising care sessions: In addition to fieldnotes being collected for the purposes of WP2, these sessions will also be audio-recorded (participants anonymised) and later transcribed for qualitative analysis.

SIL interviews: a number of individual interviews conducted with each SIL over the course of WP2. These interviews will provide deeper insight into the challenges faced by SILs, acting as co-researchers in the implementation of the ERP. It is an opportunity for SILs to describe their perspective of the implementation process and the challenges experienced in detail

greater than might be possible in a group discussion. Individual interviews are a commonly used qualitative research method in gaining insight into a particular topic from the participant's perspective, and often yields unexpected insights, generating new ideas regarding the subject discussed. The topic guides for these interviews will be flexible, iterative and minimally structured, as the areas discussed will be guided by the events unfolding in each partner ward. Interviews will be conducted at a time and place convenient to the SIL, and are expected to last 30-60 minutes each. Interviews will be audio recorded (participants anonymised) and transcribed verbatim for analysis.

Analysis

The data analysed will be a combination of data generated as part of PERFECTED WP2, and data generated solely for the PhD study. From WP2, data will include fieldnotes and reflective diaries from SIL observations, ethnographic interviews, and optimising care sessions. PhD study-generated data includes audio recording (and transcriptions) of the optimising care sessions, and individual interviews with SILs. This data will all be type up in Word documents, and imported to popular qualitative software NViVo.

The whole dataset will be analysed using an iterative, pluralist approach, including thematic analysis (TA) and critical discourse analysis (CDA). Pluralism in qualitative research is an increasingly popular analytic method in psychology [30]–[32], as it allows for a richer description of phenomena, through a combination of research paradigms and analytic methods.

TA will be used to draw out patterns in the data, and initial themes would be developed through regular discussion with the PhD researcher's supervisory team (including PERFECTED researchers). These themes will be used to give a thick description of the transfer context and the experiences of the SILs in implementing the ERP, including how experiences converge and diverge between partner sites.

CDA will then be used to gain insight into the SILs conceptualisation of the ERP, its implementation into practice, and managing barriers to implementation. CDA studies the relationship between individuals' use of discourse and worldview, uncovering implicit meanings in use of language and its role in social exchange. By analysing the range of discourse resources and discourse practices used by SILs and members of ward staff in different formats (fieldnotes, team discussions in optimising care sessions, individual interviews), this approach can provide insight into how SILs perceive and experience the process of ERP implementation and their role within it. Comparing discourse practices across the partner wards may provide added insight into the transfer context.

12. Resources required:

- Transport to partner wards for the purposes of data collection – for PhD study related data collection. To minimise costs, low fare public transport will be preferred, and data collection activities scheduled practicably.
- Audio recording equipment, e.g. dictaphone and external microphone – high quality recording equipment to ensure clarity, typically costs within region of £200. However, this equipment is available to hire within the university
- Transcription of audio recordings will be conducted by the PhD researcher, as this allows for fuller immersion in the research data, and also negates the need for paid transcription service

- Access to secure storage, IT and printing equipment, and relevant journal access for research activities are accessible through the university.

13. Source of Funding:

The present PhD study is funded by an FMH PhD studentship
Additional financial support is not deemed necessary at this time, but the PhD researcher is aware of grants and bursaries that may be available.

14. Has this project been peer reviewed? Please could you include details of who the project has been peer reviewed by.

N/A

15. Ethical issues (Please also complete research safety checklist even if no risks are identified)

NHS staff are generally considered to be less vulnerable than service users, however all potential risks should be given due consideration. NHS employees have all the rights that other research participants would be granted, and in the context of their working environment this is particularly important. All participants have rights to confidentiality and anonymity, the right to withdraw at any time, and to be treated with dignity and respect. There is an added layer of complexity when involving SILs as both co-researchers and as potential participants themselves.

BURDEN: As NHS staff are extremely busy and pressured, any participant burden is worth highlighting. The ethnographic observations and ethnographic interviews will involve minimal time commitment from ward staff, and will be conducted in a clinically sensitive manner, dependant on individual situations. The optimising care sessions will involve greater commitment from ward staff, and to mediate this, SILs will aim to arrange these at a mutually convenient time and location. The individual interviews with SILs are expected to last between 30-60 minutes, but again these will be arranged at a time and location suitable to the SILs schedule and commitments, to minimise impact and burden on participants.

BENEFITS: Whilst there are no direct or immediate benefits for participants, it may be of personal interest to staff members to be involved in a study which aims to improve patient care. Participating in qualitative research also provides staff with unexpected personal benefits such as increased self-awareness, a sense of self-efficacy, and a sense of purpose within the larger organisational environment (Hutchinson, Wilson, & Wilson, 1994).

COERCION: The sole participants in this study are NHS staff, and due to the nature of the study and the data collection, staff may feel pressured to consent to take part. Although this is always a concern for research conducted in occupational settings, this is further complicated by the use of SILs (seconded members of NHS staff) as co-researchers in the study, and participants may feel duty or personally bound to take part. However, as is stated in the participant information and consent literature, and will be further highlighted in verbal exchange, there is no expectation of staff to participate, and staff will not be penalised for not wishing to take part. Staff will be reminded that the data is being collected for ward-level research purposes, and not for individual evaluation or audit. Staff will be reassured that their decision to participate or not will not affect their employment now or in the future. With regards to the role of SILs potentially amplifying feelings of coercion, although this cannot be completely ruled out, the PERFECTED protocol specifies the use of research nurses

in taking consent in an effort to mediate this. For the individual interviews, SILs themselves may feel pressured to consent to participating, but again it will be stressed that not wishing to take part, or withdrawing at any time, will not have any professional implications.

CONSENTING: Formal written consent will be taken at the start of the study period, both for the WP2 research and for the present PhD study. However, hospital settings are fluid environments and it is likely that the staff environment will change over the 12-month study period. To ensure that participants in the study are appropriately consenting over the whole period of study, research nurses attached to WP2 will revisit wards and liaise with gatekeepers regularly in order to keep their list of ward personnel up to date. UEA researchers and co-researchers will be kept updated of those members of staff not wishing to take part, and while this could be viewed as a conflict of interest, it is a matter of practicality for researchers to be aware of which staff they should and should not be collecting data from.

WITHDRAWING CONTRIBUTIONS: As in any research study, participants have a right to withdraw consent at any time, without explanation. However, participants will be informed (as part of the consenting process) that due to the nature of the WP2 study (action research), any data collected prior to withdrawn consent cannot itself be withdrawn, as it is unrealistic to isolate any one person's contribution to the ongoing process of change. In the event a participant decides they no longer wish to participate in the study, no further study data will be collected from them.

ANONYMITY: As many of the face-to-face discussions occur with colleagues (either on the ward or in optimising care sessions), anonymity within the workplace cannot be insured. However, as stated in the participant information leaflet, the data collected is solely for the purposes of research, not for individual performance evaluation, and participants will be reminded of this verbally where appropriate. The only exception being: participants will be informed that if disclosures of malpractice, neglect or abuse are made, anonymity cannot be guaranteed in this instance.

Although optimising care sessions and SIL interviews will be audio-recorded, participants will be assigned participants numbers and therefore recordings and subsequent transcriptions will not use participant identifiable information. Fieldnotes, analyses and subsequent reports will likewise not involve the use of any participant identifiable information.

CONFLICTS OF INTEREST: The co-researchers involved in data collection (specifically SILs in reference to the present PhD study) may have conflicts of interest, as they have a role as "insider" (i.e. staff in the ward environment) and "outsider" (i.e. part of the PERFECTED research team). However, navigating these dual roles and the team dynamic will provide unique perspectives on the ERP implementation process and are of particular interest to the present study. As stated in the PERFECTED research protocol: "a conflict of interest is independent of an occurrence of impropriety. Whilst it could be argued that each of these positions may incur a financial benefits from being involved with PERFECTED, it is important to note that these are secondments, and therefore co-researchers will be being paid in line with their current salary. There will be no financial rewards or penalties for successful/unsuccessful implementation."

CONFIDENTIALITY & DATA SECURITY: The PhD researcher, as with all researchers in the PERFECTED team, is Good Clinical Practice (GCP) trained, and holds an NHS Research Passport, meaning they are bound by the confidentiality clause included. A breach of confidentiality (disclosure of any data outside of the

research project parameters) will be considered a serious breach and subject to disciplinary proceedings.

All study data collected as part of PERFECTED WP2 will be stored securely at the University of East Anglia (UEA), Norwich, in a locked filing cabinet within the PERFECTED office (only accessible to those within the core UEA research team). Digital files will be stored on a secured PERFECTED "shared drive", which is stored on UEA servers, with restricted access credentials.

For data collected for the sole purposes of the present PhD study, physical study materials will be kept in a lockable cabinet in the PhD researcher's office (only accessible by the PhD researcher). This office is only accessible by a limited number of UEA postgraduate students, via swipe-card access.

During data analysis, individual participants and hospital sites will be pseudonymised for ease of reference. Any extracts of text used for the final study report will be fully anonymised to ensure these extracts are not traceable back to individual participants or their ward.

16. Proposed start and finish dates:

    Start date: 10/2015
    Finish date: 10/2016

17. Where will the research be carried out?
    University of East Anglia; James Paget Hospital (Norfolk); Queen's Medical Centre (Nottinghamshire); Huddersfield Royal Infirmary (Yorkshire)

18. Do you need to survey UEA students or staff outside the Faculty of Medicine and Health Sciences? If so, you need to get approval in principle from the Dean of Students prior to applying to the FMH Ethics Committee. Please attach a copy of approval in principle to this application form.

    https://www.uea.ac.uk/polopoly_fs/1.151266!survey_form.pdf

    N/A

19. Information sheets and consent forms must be appended (c.f. NRES site for models, www.nres.npsa.nhs.uk Please ensure that participants are requested to initial the boxes on the consent forms.

Attached are copies of relevant forms from PERFECTED WP2, for the committee's reference

20. **Checklist (double click on each box and select 'checked' once done)**

Have you completed all sections of the application in language which will be understood by lay people?	☒
Has your supervisor signed the form?	☒
Have you included your academic address (not your home address)?	☒

Have you numbered all the pages in your protocol/attachments? (If the pages are not numbered the Committee may return your application)	☒
Have you included the following documents, if applicable?	
Protocol	☒
Gatekeeper consent	☐ N/A
Consent forms	☒
Participant information sheets (using NRES format)	☒
Letters to participants	☐ N/A
Copies of questionnaires	☐ N/A
Copies of correspondence from other ethic committees	☐ N/A
Copies of all recruitment letters, emails, posters and adverts	☐ N/A
Research Safety Checklist	☒
Dean of Student Office approval in principle for survey	☐ N/A
Have you proof-read your application to check for typographical and grammatical errors?	☒
Have you included a header and footer on each page with your name, date of submission and page number?	☒
Have you included 16 photocopies?	☒
Have you e-mailed a copy to the Research & Enterprise Office?	☒

Supervisory arrangements for **STUDENT PROJECTS ONLY**

Degree/Course PhD.....

School MED..... ....

Academic Supervisor PROF CHRIS FOX.....

I have read this application and can confirm that I am taking supervisory responsibility for this project.

In the case of a student research outside the normal course requirements I confirm that I am happy to take responsibility for the quality of protocol design, the provision of necessary resources, statistical support and usual supervision and governance of the student.

Project Supervisor's signature ..... Date 15/10/5

Post Held ...Professor of Clinical Psychology

Faculty of Health
Researcher Safety Checklist

Project Title: Implementing an Enhanced Recovery Pathway for hip fracture patients with dementia: Exploring barriers and aids to training transfer in acute hospital settings

Principle Investigator: Mrs Astrid Coxon

ACTION	Notes on project-specific arrangements & guidelines	Whose responsibility?	Done?
Organisational			
Take general risk assessment into account when designing project	Consulting with PERFECTED	AC	x
Take general risk assessment into account when costing project proposal	Consulting with PERFECTED	AC	x
Confirm professional indemnity insurance for researchers	PhD researcher	AC	x
Take researcher's experience / personality / background into account when recruiting	Consulting with PERFECTED	AC	x
Obtain UEA ID, and any honorary contract IDs	PERFECTED researcher ID & research passport	AC	x
Teams attends training course on safety issues and management		AC	x
Confirm adequate business-use insurance for researchers' own transport		AC	x
Clarify circumstances in which home visit is necessary (vs. more neutral environment)		AC	x
Attend cultural awareness training course		AC	x
Attend course (or use other means) to raise awareness of risks concerning specific groups (e.g. drug users) and topics (e.g. mental health, poverty, discrimination, social exclusion)		AC	x

Organise team meeting to agree on general level of risk, systems and responsibilities		AC	x
Attend training course on interpersonal behaviour and handling aggression / difficult situations		AC	x
Attend first-aid training course		AC	x
Set up incident reporting and debriefing system		AC	x
Review potential for clash between researcher safety and informant confidentiality		AC	x
Operational (Site visit for interview)			
Review informant notes beforehand, to identify potential risk		AC	x
Phone other health/social workers in contact with informant, for relevant information and suggestions		AC	x
Phone informant on the day, to identify potential risk		AC	x
Visit site beforehand to assess risk (or make enquiries about the neighbourhood with other colleagues / sources)		AC	x
Determine presence of any potentially dangerous animals, and decide what approach to take		AC	x
Take minimum valuables		AC	x
Note emergency phone number cancelling credit cards etc		AC	x
Take mobile phone		AC	x
Take personal alarm		AC	x
Dress appropriately		AC	x
Go with colleague / work in pairs		AC	x
If taking laptop, delete personal info on it		AC	x
Decide on appropriate transport (car / taxi / bicycle / foot), bearing in mind location of parking place / drop-off point, journey between there and informant's home, time of day arriving and departing		AC	x
Set up location-monitoring arrangements (e.g. group whiteboard, pre-arranged pick-up by colleague / taxi, prearranged phone-calls to/from a specific colleague at 'base')		AC	x
Agree telephone code-word(s) for danger, and response(s)		AC	x

Signature: 

Date: 14/10/15

Appendix 5 - UEA REC decision re: initial ethics application

Faculty of Medicine and Health Sciences Research Ethics Committee

University of East Anglia

Astrid Coxon
MED

Research & Enterprise Services
REN West (SCI)
University of East Anglia
Norwich
NR4 7TJ

Email: fmh.ethics@uea.ac.uk
Direct Dial: +44 (0) 1603 59 1720

Web: http://www.uea.ac.uk

02 November 2015

Dear Astrid,

Implementing an Enhanced Recovery Pathway for hip fracture patients with dementia: Exploring barriers and airs to training transfer in acute hospital settings: 20152016-16

The submission of your research proposal was discussed at the Faculty Research Ethics Committee meeting on 29th October 2015.

The Committee have a number of concerns which they would like you to consider and address accordingly

1. Page 5 references Annex 4 but what is in Annex 4 is not consistent with this
2. PIS – says meetings are recorded but doesn't specify that this is for a PHD. We need PIS / consent form for your part of the study and not just PERFECTED as a whole.

The Committee would like you to be made aware that Toby Smith and Bridget Penhale were present at the meeting but did not contribute to the review. They are both available for further support in respect of your application.

Please resubmit your application when you have resolved/clarified the above issues. The committee has decided that the number of changes and the importance of each of these changes is such that this should be reconsidered by the committee at one of its regular monthly meetings. The submission dates are available at https://intranet.uea.ac.uk/foh/intranet/ethics-committee and the committee reserves the right to request further changes after that discussion. Please include your amendments as a tracked change within your application/proposal.

As your project does not have ethics approval until the above issues have been resolved, I want to remind you that you should not be undertaking your research project until you have ethical approval by the Faculty Research Ethics Committee. Planning on the project or literature based elements can still take place but not the research involving the above ethical issues. This is to ensure that you and your research are insured by the University and that your research is undertaken within the University's 'Guidelines on Good Practice in Research' approved by Senate in February 2012.

Yours sincerely,

Mark Wilkinson
Chair
FMH Research Ethics Committee

Appendix 6 – Ethical approval (substantial amendment to PERFECTED)

NHS
Health Research Authority

South Central - Oxford C Research Ethics Committee

Level 3, Block B
Whitefriars Building
Lewins Mead
Bristol
BS1 2NT

Tel: 0117 342 1383

15 February 2016

Dr George Christopher Fox
Clinical Reader/Honorary Consultant Psychogeriatrician
University of East Anglia
Norwich Medical School
Norwich
Norfolk
NR47TJ

Dear Dr Fox

Study title:	**PERFECTED WP2: Implementing the optimisation of hospital care delivery to older adults by NHS staff via action research methodology**
REC reference:	**15/SC/0294**
Protocol number:	**N/A**
Amendment number:	**Amendment 1**
Amendment date:	**02 December 2015**
IRAS project ID:	**179797**

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*
Interview schedules or topic guides for participants [PhD Indicative Interview Schedule SIL]	1	17 November 2014
Notice of Substantial Amendment (non-CTIMP) [AmendmentForm_ReadyForSubmission]	Amendment 1	02 December 2015
Participant consent form [Annex 11 PhD Study Consent Form V1 02 12 2015]	1	02 December 2015
Participant information sheet (PIS) [Annex 10 PhD Study PIS V1 02	1	02 December 2015

Appendix 7 – Email to SILs – Invitation to participate

Astrid Coxon (MED)

From: Astrid Coxon (MED)
Sent: 17 February 2016 17:15
To: [redacted]
Subject: SIL interviews
Attachments: Annex 10 PhD Study PIS V1 02 12 2015.doc; Annex 11 PhD Study Consent Form V1 02 12 2015.doc

Hello all!
I hope you're all ok and that things are progressing well

The wait is finally over and I am pleased to report I have finally received ethical clearance to progress with my research interviews!
I know I have only mentioned these briefly to you before, so I'd like to take this opportunity to explain my aims and the process in a bit more detail.

Essentially, I would like to interview each of you individually on three separate occasions over the course of the ERP implementation process. These interviews would be exploring your expectations and experiences of being a SIL, and how you have helped to make the ERP changes happen. This will help me to understand what is involved in the process of translating protocols into action in a real hospital ward.

The interviews would be audiorecorded so that I can transcribe and analyse the data later, but of course these would be anonymised and kept confidential. I estimate that each interview would take around an hour, and I would organise these at a time and place to suit you.

For the first interview, I will be asking mainly about the hospital you are based in, your views about the ERP, your expectations as a SIL, and any barriers or problems you've encountered so far. To give you some more information, I've attached a copy of the participant information sheet and the consent form.

So I wondered what your thoughts were on this? I understand you are all meeting in [redacted] on 15th March, and if you're amenable, it might be practical to set up the first round of interviews to coincide with this?

Let me know your thoughts, and if you have any questions or comments, please do let me know! If you want to get in touch, please feel free to email back, or my mobile number is below.

Best wishes
Astrid

Astrid Coxon
Ph.D Candidate

Norwich Medical School

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Appendix 8 – Indicative Interview Schedule

Indicative interview schedule for PERFECTED Service Improvement Leads

This Interview Schedule highlights the ***general topics*** for the interviewers to explore during the 30-60 minute semi-structured interviews with PERFECTED Service Improvement Leads (SILs). It is ***important to note*** that these interviews are ***semi-structured*** in design and hence the interviewer is in large part guided by the interviewee regarding both the specific areas covered and the emphasis given to particular topics.

To maximise the time available, SILs will be sent in advance the 4 subject areas to be covered, to help prepare their thoughts. The aim of the interviewer is to ensure that the interviewee is discussing topics covered by the schedule below. It is anticipated that interviews will follow the order provided below:

Introductions and collecting basic details
- Explain the boundaries of the interview
- Obtain written consent from the interviewee

Perceptions of their role as SIL

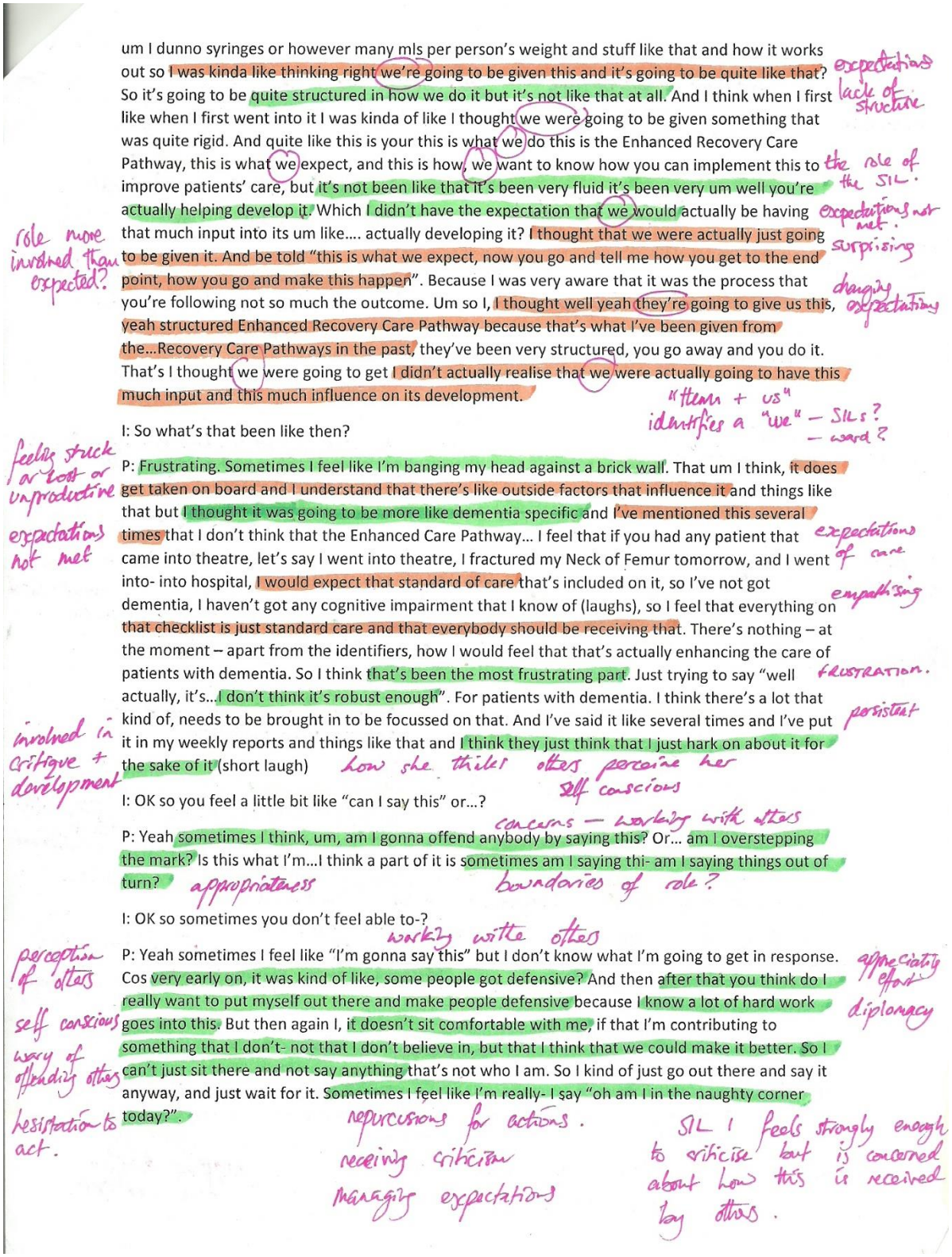
Expectations of PERFECT-ER - perceived barriers and aids to implementation

Managing challenges

Concluding the interview
- Reiterate the boundaries of the interview
- What happens next
- Thank you and goodbyes

Possible prompts to be employed throughout:
Previous experience; early expectations; reasons for involvement; ward environment; team dynamics;

Appendix 9 – Example of a coded extract from a SIL interview



um I dunno syringes or however many mls per person's weight and stuff like that and how it works out so I was kinda like thinking right we're going to be given this and it's going to be quite like that? So it's going to be quite structured in how we do it but it's not like that at all. And I think when I first like when I first went into it I was kinda of like I thought we were going to be given something that was quite rigid. And quite like this is your this is what we do this is the Enhanced Recovery Care Pathway, this is what we expect, and this is how, we want to know how you can implement this to improve patients' care, but it's not been like that it's been very fluid it's been very um well you're actually helping develop it. Which I didn't have the expectation that we would actually be having that much input into its um like.... actually developing it? I thought that we were actually just going to be given it. And be told "this is what we expect, now you go and tell me how you get to the end point, how you go and make this happen". Because I was very aware that it was the process that you're following not so much the outcome. Um so I, I thought well yeah they're going to give us this, yeah structured Enhanced Recovery Care Pathway because that's what I've been given from the...Recovery Care Pathways in the past, they've been very structured, you go away and you do it. That's I thought we were going to get I didn't actually realise that we were actually going to have this much input and this much influence on its development.

I: So what's that been like then?

P: Frustrating. Sometimes I feel like I'm banging my head against a brick wall. That um I think, it does get taken on board and I understand that there's like outside factors that influence it and things like that but I thought it was going to be more like dementia specific and I've mentioned this several times that I don't think that the Enhanced Care Pathway... I feel that if you had any patient that came into theatre, let's say I went into theatre, I fractured my Neck of Femur tomorrow, and I went into- into hospital, I would expect that standard of care that's included on it, so I've not got dementia, I haven't got any cognitive impairment that I know of (laughs), so I feel that everything on that checklist is just standard care and that everybody should be receiving that. There's nothing – at the moment – apart from the identifiers, how I would feel that that's actually enhancing the care of patients with dementia. So I think that's been the most frustrating part. Just trying to say "well actually, it's...I don't think it's robust enough". For patients with dementia. I think there's a lot that kind of, needs to be brought in to be focussed on that. And I've said it like several times and I've put it in my weekly reports and things like that and I think they just think that I just hark on about it for the sake of it (short laugh)

I: OK so you feel a little bit like "can I say this" or...?

P: Yeah sometimes I think, um, am I gonna offend anybody by saying this? Or... am I overstepping the mark? Is this what I'm...I think a part of it is sometimes am I saying thi- am I saying things out of turn?

I: OK so sometimes you don't feel able to-?

P: Yeah sometimes I feel like "I'm gonna say this" but I don't know what I'm going to get in response. Cos very early on, it was kind of like, some people got defensive? And then after that you think do I really want to put myself out there and make people defensive because I know a lot of hard work goes into this. But then again I, it doesn't sit comfortable with me, if that I'm contributing to something that I don't- not that I don't believe in, but that I think that we could make it better. So I can't just sit there and not say anything that's not who I am. So I kind of just go out there and say it anyway, and just wait for it. Sometimes I feel like I'm really- I say "oh am I in the naughty corner today?".