Implementing innovation in NHS Trusts: Exploring the dissemination and implementation of NICE workplace health and wellbeing guidance in three organisational case studies

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PhD thesis, 2016

Declaration

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

Word count: 82, 484

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Abstract

The National Institute for Health and Care Excellence (NICE) provides evidence-based guidance for employers on how to improve the health and wellbeing of their staff. My research project seeks to explore the dissemination and implementation of two pieces of NICE workplace guidance in three NHS Trusts, which varied in size and geographical location, using the Greenhalgh et al diffusion of innovation conceptual framework (2004).

A thematic cross-case analysis with 62 face-to-face semi-structured interviews was conducted. A broad range of participants were selected using purposive sampling, including board members, middle managers, administrative staff and clinical staff.

My findings suggest that the formal Trust processes for monitoring the NICE workplace guidance were little more than a 'box-ticking' exercise.

Interviewees suggested that lack of slack resources (spare capacity) and differing organisational priorities may have hindered the implementation of the NICE workplace guidance. In addition, incentives and mandates played a large role in influencing their decision to implement innovations.

The findings also highlight limitations in the communication and dissemination of the NICE workplace guidance. Interviewees believed the NICE workplace guidance was poorly formatted and presented, and believed that the workplace guidance needed to be better targeted at key audiences. However, the NICE workplace guidance had a broad target audience, and this may have restricted NICE's ability to use targeted language, formatting and communications.

Interviewees did not believe the guidance added value to their Trust, and used other innovations that were similar to the NICE workplace guidance but better met their needs. My findings clearly demonstrate the importance of relative advantage to the diffusion of an innovation. Future NICE

guidance should ensure that resources used to develop and implement a piece of guidance justify the

potential added value over and above similar existing innovations.

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List of abbreviations

BNI – British Nursing Index

CEA – Clinical Effectiveness and Audit

CFIR - Consolidated Framework for Implementation Research

CPG - Clinical Programme Group

CQC – Care Quality Commission

DH – Department of Health

ERIC - Education Resources Information Centre

HPH - Health Promoting Hospitals

HR – Human resources

HSE – Health and Safety Executive

HWB – Health and wellbeing

NHS – National Health Service

NHSLA – National Health Service Litigation Authority

NICE – National Institute of Health and Care Excellence

NPT - Normalisation Process Theory

OEG - Operational Executive Group

OH – Occupational health

ORCA - Organisational Readiness to Change Assessment

PARIHS - Promoting Action on Research Implementation in Health Services

PCT - Primary Care Trust

RCP – Royal College of Physicians

SDC - Sustainable Development Committee

TDF - Theoretical Domains Framework

Transcription notation

Interview excerpts were minimally edited for easier reading.

The following notation was used:

… Indicates that a section of text was edited out

[ ] Text in square brackets indicates clarification added by me.

AB indicates question asked by me

Acknowledgements

My PhD research coincided with tumultuous personal events. I thank the people in this acknowledgement with the unwavering belief that had it not been for them, I would have been unable to complete my thesis.

To my supervisors, Prof Rosalind Raine and Prof Glenn Robert who guided my intellectual and academic journey.

To the Colt Foundation for providing financial support and in particular Dr. Ira Madan and Jackie Douglas for providing the guidance, mentorship and listening ear that saw me through the most difficult times.

To the people who gave up their valuable time to be interviewed.

To my wife, for her patience, understanding, support and presence. She stood by and felt every high and every low, and I cannot thank her enough.

To my parents, who gave me the belief to reach for anything and my brother, who kept my feet on the ground to work hard for it.

To my friends who provided encouragement and a sounding board for my ideas.

To my mother, who despite everything she was going through never, ever, stopped being there for me.

1. Introduction

1.1 Introduction

In my first substantive research post, I explored the development and applicability of quality appraisal methods in the context of clinical guidelines (Baker et al, 2010; Baker et al, 2011). As time passed, my interests moved from the development of guidelines to their implementation. The area I was working in at the time, occupational health, was undergoing a major introspection in the form of a review of the health and wellbeing of the NHS workforce (Boorman, 2009a). It was at this point that I became aware of the workplace health and wellbeing (HWB) guidance from the National Institute of Health and Care Excellence (NICE). Anecdotally, experts in occupational health doubted that NHS Trusts knew about, let alone implemented, the NICE workplace guidance. Even through a cursory background reading I was able to identify a plethora of papers on barriers and facilitators to the implementation of guidelines, mainly from a clinical perspective, but also from an organisational standpoint (Grimshaw et al, 2004; Cullum et al, 2004; Davies et al, 2010). However, guidelines research has tended to focus (though certainly not exclusively) on the evidence on which a guideline is based, since disseminating evidence-based practice is the *raison d'être* of evidence-based guidelines. After reading Cullum et al's (2004) substantive report on the dissemination and implementation of NICE guidelines, I picked up on a small phrase in which they described NICE guidelines as an innovation (p.120). However, they made only a passing reference to diffusion of innovation research, but I felt that this area required further exploration. My PhD thesis is therefore grounded in diffusion of innovations research and conceptualises guidelines not only as a set of evidence-based statements, but as a whole product with inherent and operational attributes (Greenhalgh et al, 2004a).

1.2 Diffusion of innovations research

Classical diffusion theory states that diffusion of innovation follows an 'S-curve', where the beginning of the diffusion is characterised by a lag phase, which is then followed by accelerated and exponential uptake in adoption of the innovation, until the adoption speed begins to decelerate as it reaches saturation (Rogers, 1995). However, this model of diffusion presupposes that the population relevant to the innovation remains constant over time (with no losses or new additions), and also that the value attached to the innovation is constant (Greenhalgh et al, 2004a). This ideal-type classical model can be built upon by the caveats that populations are rarely homogenous and constant. Each population may have a number of sub-populations, each with its different characteristics, culture, history and value systems. Disentangling these sub-populations would reveal different diffusion curves, with different rates of adoption and different extents in the number of people who adopt the innovation. These caveats may produce a curve different from the classical 'S-shape'. However, even taking into account more complex curves, such shapes can only be used for basic description of the general rate of diffusion of innovation over time. They do not help answer questions about complex processes, barriers, facilitators or reasons for adoption or lack of adoption (Greenhalgh et al, 2004a). It is this gap that diffusion of innovation models try to fill.

Diffusion of innovation in health service organisations is set within the wider 'implementation science' literature base on dissemination and implementation and, until the last two decades, represented only sub-sections of different research areas. However, in what is considered a landmark review on the diffusion of innovations literature (Damschroder et al, 2009), Greenhalgh et al (2004a) charted the emergence of modern diffusion of innovations theory, from small sub-sets of larger research traditions to the culmination of a separate tradition in its own right.

Models in implementation science that focus on dissemination and implementation can be used to explore the diffusion of an innovation (Greenhalgh et al, 2004a; Tabak et al, 2012). In order to be

usable for researchers and policy makers, models can seek to balance the complexity of implementing innovations with a pragmatic and parsimonious approach to their structure (Damschroder et al, 2009). However, this balance is difficult to strike. By nature, diffusion of an innovation is a dynamic process, which may create complexity in models that attempt to capture this dynamism. Depending on the context, each construct and sub-construct in a model has the potential to modify the strength of other constructs and sub-constructs in terms of their influence on diffusion (Greenhalgh et al, 2004a). It is this contextual caveat that creates complexity, particularly at the detailed level where researchers may want to explore the importance of a particular construct on diffusion.

1.3 Research aims and objectives

The primary aim of my PhD research was to explore the diffusion of two pieces of NICE workplace health and wellbeing guidance in three NHS acute Trusts.

In order to achieve this, my objectives were to:

1. Describe the processes by which the relevant NICE workplace guidance was disseminated to and within the NHS acute Trusts.

2. Describe the processes of implementation of the relevant NICE workplace guidance within the NHS acute Trusts.

3. Explore the above two objectives using a diffusion of innovation model, testing the applicability of this model to my research.

4. Identify potential gaps in the model and make suggestions to its constructs that may add to the diffusion of innovations literature base.

5. Develop research and policy recommendations based on my findings.

By immersing myself in diffusion of innovation research and applying a diffusion of innovation model as my conceptual framework, my intention was to add value to the discourse on the dissemination and implementation of NICE guidance. In doing so, I was able to meet Damschroder and Lowery's

argument that: 'use of theory-based and pre-specified constructs will help to generalise findings and make them more easy to integrate with findings from other studies to build a stronger evidence base to identify factors that influence or predict implementation success' (2013, p.2).

1.4 Scope of this thesis

My PhD research is grounded in the diffusion of innovation literature base. It was important to ensure that I defined my scope sufficiently tightly to allow depth in my research, yet not so tightly that my research would have no wider applicability. Part of the difficulty in this endeavour is that diffusion of innovations research has traditionally been seen as having an amorphous research base (Greenhalgh et al, 2004a). I ensured that my scope allowed me to successfully meet my research aims and objectives by:

1. Researching the two pieces of NICE workplace guidance as whole products rather than dividing them into their individual recommendations, while allowing interview participants to discuss individual recommendations if such issues arose during the interviews.

2. Acknowledging the development process of NICE guidance but, rather than making judgements on the quality of that guidance, ensuring that my analysis of its quality was guided by the perceptions of the interview participants.

In order to meet my scope, it was important to have clear definitions of key terms in my thesis (outlined below). It was also important to ensure that my conceptual framework was applicable to diffusion of innovation research and to ensure that the conceptual framework I used guided my research methods and analysis of findings.

1.4.1 Key definitions

Definitions in diffusion of innovation are contested (Damschroder et al, 2009). It is therefore important for me to set out precisely the definitions I am using when discussing the terms fundamental to this thesis in order to clarify the scope of my research.

Innovation

The definition of innovation I use is from Greenhalgh et al's review (2004a). Whilst a number of authors have defined innovation (Rogers, 1995; Osbourne, 1998), Greenhalgh et al's (2004a) definition emerged from their extensive review of the diffusion of innovation literature. Greenhalgh et al (2004a) define 'innovation' as 'a set of behaviours, routines and ways of working, along with any associated administrative technologies and systems, which are perceived as new by a proportion of key stakeholders … Such innovations may or may not be associated with a new health technology' (p.36). It is important to note that for this definition, 'innovation' is not necessarily novel in the sense of not having been seen or developed before. Instead, innovation is new to a particular context for the majority of people. This means that existing products or processes may have been implemented for some time by one organisation, whilst in another organisation they represent a product, behaviour or way of working that is new and therefore an innovation. Using this definition means that NICE guidance can be described as an 'innovation'. This is important for a number of reasons. Firstly, the content of NICE guidance is not necessarily new since it is based on a review of existing research. However, the pulling-together of that research into a single set of guidelines with recommendations on ways of working would represent 'innovation' as defined by Greenhalgh et al (2004a). Secondly, in an organisation where some stakeholders – even as many as a whole department – are already aware of the NICE guidance through its stakeholder consultation process or through knowledge of the research base, the NICE guidance would still represent an innovation if the majority of stakeholders within that organisation did not know about it. This point is important since I am taking a whole-organisation approach to the case study sites.

I also define the NICE guidance as a product innovation, rather than a process or administrative innovation, since it is packaged and disseminated in one identifiable and tangible document.

Diffusion, dissemination, implementation, and adoption
It is outside the scope of this project to explore the various definitions in implementation science (Greenhalgh et al, 2004a; Damschroder et al, 2009), though for purposes of clarity and operationalisation it is nonetheless important to choose a definition. Greenhalgh et al (2004a) use Rogers' (1995, p.5) definition of diffusion as the process whereby an innovation is communicated over time among members of a social system. Key to this definition is that innovation, along with its related ideas, information and practices, is spread passively. However, whilst Greenhalgh et al's review intimates that diffusion is both the communication and use of an innovation, I prefer to use the Department of Health's (2011) definition of diffusion as it more explicitly encapsulates my own conceptualisation of diffusion, in that diffusion is more than the communication of an innovation. Diffusion, therefore, is: 'the systematic uptake of the idea, service or product into widespread use across the whole service' (Department of Health, 2011, p.9). Dissemination, on the other hand, is 'a planned and active process intended to increase the rate and level of adoption above that which might have been achieved by diffusion alone' (Greenhalgh et al. 2004a, p.38). Diffusion is therefore a broader concept of spread than dissemination, and encapsulates dissemination, adoption and implementation over time.

As with diffusion and dissemination, there are subtle differences between the concepts of implementation and adoption. I use Greenhalgh et al's definition of adoption and Damschroder et al's (2009) definition of implementation. Adoption is the formal decision by organisations or individuals to implement and make use of an innovation (Greenhalgh et al, 2004a). Whilst adoption may not always be a single event or rational process, it manifests prior to implementation, which is 'the constellation of processes intended to get an intervention into use within an organisation …

implementation is the critical gateway between an organisational decision to adopt an intervention and the routine use of that intervention' (Damschroder et al, 2009, p.3).

Processes

My PhD research objectives include describing the processes of dissemination and implementation of NICE workplace guidance in three NHS Trusts. It is therefore important to define processes in order to know what to explore. Accordingly, I use Langley's (1999) definition of processes: in her paper on strategies for theorising from process data, Langley described processes as the interaction between the series of events and procedures that occur within an organisation for a given context (Langley, 1999). With regards to my PhD thesis, this can mean the steps that are taken to disseminate and implement NICE workplace guidance, and how these interact with the diffusion of the guidance throughout the Trust.

Context

Context is frequently discussed in implementation research (Jacobs et al, 2014) and I stratified three NHS acute Trusts in part to explore whether their differing contexts influence the diffusion of NICE guidance in their respective organisations. Context in my thesis is defined as "the set of circumstances or unique factors that surround a particular implementation effort" (Damschroder et al, 2009, p.3). However, when discussing context it is common to use the term as a reference both to broad environmental characteristics such as national policies and to more specific settings defined above (Damschroder et al, 2009).

1.5 Thesis structure

Background chapter

In the background chapter I set out the context of my thesis.

Literature review chapter

In this chapter I review and discuss conceptual models and constructs relevant to exploring the diffusion of innovation in health service organisations. I briefly outline why the conceptual model that best met the research aims and objectives of my PhD project is the Greenhalgh et al (2004) model and why I ultimately used it for my conceptual framework.

Methods chapter

In this chapter I outline the methods I used for my study and their appropriateness for understanding the diffusion of NICE workplace HWB guidance in three NHS acute Trusts.

Results chapter

In this chapter I present the main findings from my interviews with 57 members of staff in three NHS acute Trusts and with five staff members at NICE. The findings are divided thematically based on the Greenhalgh et al (2004a) conceptual model.

Discussion chapter

In the discussion chapter I consider the meaning of my findings in relation to the Greenhalgh et al model (2004a) and the relevant diffusion of innovation literature. I will discuss the relevant issues and debates in the diffusion of innovation literature, and will also reflect on whether the methods I used were effective. Finally in this chapter I look at the strengths and limitations of the study as a whole.

Conclusion chapter

In the concluding chapter I provide a summary of the whole thesis, drawing together the key points from each preceding chapter. I conclude with policy and research implications arising from my PhD research, and a set of recommendations.

2. Background

2.1 Introduction

I begin this background chapter by providing an overview of the National Institute for Health and Care Excellence (NICE) as an organisation before focusing on its guidance. In particular, I will briefly highlight the key differences between the various types of guidance NICE produces and present the development process for the NICE public health guidance. I will then provide a brief overview of the work of the Implementation Division at NICE.

Having established the broad background, I will then outline how I chose the two pieces of NICE guidance that are the focus of this project, before going on to describe these two pieces of guidance in more detail. I will then focus on two other areas that are pertinent to my PhD research. I look at the Boorman Review (2009a), which was a major review of NHS staff health and wellbeing (HWB) published around the same time as the two pieces of NICE guidance examined in my PhD research. I then explore the audits by the Royal College of Physicians (RCP) on the implementation of NICE workplace health and wellbeing guidance (2011, 2014). The findings of this audit were published during the time I have been working on my PhD, and I will outline how I can add value to the findings of the audit. I conclude this chapter by outlining the scientific justification for undertaking this PhD.

2.2 The National Institute for Health and Care Excellence

The National Institute for Health and Care Excellence (NICE) was originally established to reduce variations in NHS treatment, and its core audience was the NHS and healthcare professionals. NICE develops a number of different types of guidelines and guidance (see section 2.2.1).

NICE was founded in 1999 as the National Institute for Clinical Excellence to develop evidence-based guidance 'on the promotion of good health and the prevention and treatment of ill health for patients, healthcare professionals and the wider public' (NICE, 2007a, p.4). NICE was originally designated a

special health authority, which meant that it was an NHS Trust that was operated at 'arm's length' by the Department of Health and delivered services nationally rather than to a specific region, and was ultimately accountable to the Secretary of State for Health. NICE changed its name to the National Institute for Health and Clinical Excellence in 2005 and on 1 April 2013 NICE changed its name to the National Institute for Health and Care Excellence, when it became an executive non-departmental public body, meaning that it is operationally accountable to a board rather than to the Secretary of State. Since its inception, its target audience has expanded to include local authorities, employers, employees, the public and stakeholders working in health, health promotion and social care.

In 2010, NICE began developing quality standards, formed on the basis of NICE guidance and other guidance accredited by NICE. The real catalyst for the quality standards, however, was the Health and Social Care Act in 2012, which set out NICE's responsibilities for developing quality standards in the area of health, social care and public health. NICE's increased remit since 2010 also includes managing NHS Evidence (a database of clinical and non-clinical evidence and best practice) and accrediting organisations before they are allowed to submit guidelines on NHS Evidence. Another major addition to NICE's responsibilities is the development of NICE Pathways, an online tool that allows health and social care professionals to view various related NICE guidance and recommendations around a particular topic (such as diet). Nevertheless, despite this fairly substantial growth in the remit and scope of NICE, its core aim remains that of raising standards, quality and promotion of health care through evidence and best practice.

2.2.1   NICE Guidance

There are four centres at NICE tasked with producing different types of guidance. The Centre for Clinical Practice produces clinical guidelines (on, for instance, the treatment and care of specific diseases or conditions) and works with the Medicines Prescribing Centre; the Centre for Health Technology Evaluation produces health technology appraisals (relating, for instance, to the use of

new or existing drugs, medical devices, diagnostic techniques or surgical procedures), and appraisals on interventional procedures (for instance, on the safety and efficacy of surgical or endoscopic procedures); the Centre for Public Health Excellence produces guidance on public health (including on the promotion of public health and the prevention of disease); and the Health and Social Care Directorate includes the Quality Systems team, responsible for producing the quality standards for NICE (NICE, 2015b).

NICE develops 11 different types of guidance (although safe staffing has been suspended since 2015): clinical guidelines; public health guidelines; social care guidelines; safe staffing guidelines; medicines practice guidelines; quality standards; technology appraisals; interventional procedures; medical technologies; diagnostics guidance; and highly specialised technologies (NICE, 2015a). Table 1 shows the number of pieces of guidance published and in development (as at the beginning of September 2015), highlighting that interventional procedures, technology appraisals and clinical guidelines form the organisation's dominant work.

Table 1 - Number of published NICE guidance until 02/09/2015

Published (number)	In development (number)
Clinical (159)	Clinical (71)
Diagnostics (16)	Diagnostics (11)
Interventional procedures (458)	Interventional procedures (45)
Medical technologies (25)	Medical technologies (11)
Public health (57)	**Public health (24)**
Technology appraisals (271)	Technology appraisals (169)
Social care (1)	Social care (10)
Safe staffing (2)	Safe staffing (suspended)
Medicines practice (2)	Medicines practice (3)
Quality standards (98)	Quality standards (39)
Highly specialised technologies (1)	Highly specialised technologies (5)
Total published guidance (1090)	**Total guidance in development (388)**

Source: adapted from NICE http://www.nice.org.uk/guidance on 02/09/2015

The clinical guidelines produced by NICE have the aim of improving the delivery of healthcare for specific conditions and healthcare professionals are expected to observe the recommendations in the clinical guidelines when making clinical decisions (NICE, 2007a). The diagnostics guidance is closely linked to the medical technologies guidance but specifically provides recommendations on the efficacy and cost-effectiveness of new diagnostic technologies. The interventional procedures guidance recommends whether a procedure for diagnosis or treatment can be used safely and whether it works well for routine use. Medical technologies guidance, similarly to the diagnostics guidance, makes recommendations on the efficacy and cost-effectiveness of medical technologies. Technology appraisals recommend when and how medicines and treatments can be used, based on clinical evidence and cost-effectiveness (NICE, 2015i). The highly specialised technologies guidance comprises recommendations specifically on the use of new and existing highly specialised medicines and treatments for very rare conditions (NICE, 2015c). The medicines practice guidelines provide good

practice recommendations for the governing, commissioning, prescribing and decision-making concerning medicines (NICE, 2015d). The safe staffing guidance looked at safe and efficient staffing levels in the NHS, although it did not include recommendations on setting minimum staffing levels (NICE, 2015e). NICE's involvement in developing the safe staffing guidance has now been suspended and transferred to NHS England (NICE, 2015f). The quality standards are sets of priority statements designed to drive measurable quality improvements in health and social care, and are derived from NICE guidance and other NICE accredited evidence (NICE, 2015g). NICE was given the remit to develop social care guidelines in 2013. The social care guidelines are evidence-based recommendations on the effectiveness and cost-effectiveness of specific social care interventions and services (NICE, 2015h). Public health guidance contains recommendations aimed at the population, sub-populations, groups, organisations, families, or individuals depending on what is the most appropriate. Within these groups, the public health guidance is primarily aimed at public health professionals and those within the NHS that have public health responsibilities, although they also have a wider audience that includes local authorities, employees and employers, patients, stakeholders relevant to the particular guidance and the wider community and private sectors (NICE, 2012).

The first NICE guidance that contained workplace health and wellbeing recommendations was the NICE 'Obesity prevention' guidance published in 2006 (NICE, 2006). One year later, NICE published their smoking cessation guidance which was their first guidance dedicated completely to the workplace (NICE, 2007b). Since then, NICE has published workplace guidance regarding mental wellbeing, physical activity, long-term sickness, and management practices (NICE, 2008a; 2008g; 2009a; 2009c; 2015m).

The development of NICE guidance follows a methodologically rigorous process, and includes stakeholder engagement. The NICE guidance development process is governed by a transparent and explicit quality assurance system, with all methodologies and processes published on the NICE website and the results of any consultations also published or available on request (NICE, 2012). Guidance is

based on the best current available evidence, and whilst mostly this evidence comes from scientific literature, it can also encompass evidence and knowledge from organisations, the policy community, practitioners and other experts, and service users. Systematic critical appraisal, models, theories, expert opinions and consultations are used in this process (NICE, 2012). Whilst there are different development processes for different types of guidance, the processes are encompassed by the principles set out in this paragraph.

One of the main differences between the types of NICE guidance is in the extent to which NHS Trusts are required to follow the recommendations. The health technology appraisals are the most explicitly mandatory out of the NICE guidance types as they were supported by a legislative requirement for NHS England to make funding available within three months of their publication so that hospitals can fulfil the recommendations they set out (NHS Commissioning Board, 2013). This legislative requirement distinguishes the technology appraisals from other forms of guidance, the recommendations of which NHS organisations need only to take into account when developing their policies (JR, 2009). However, NICE clinical guidelines are de facto mandated through the Care Quality Commission (CQC)[1] requirements. NHS Trusts are required to demonstrate to the CQC that they are monitoring the implementation of applicable NICE guidance (and NICE quality standards). Such a requirement is found within the CQC essential standards of quality and safety (CQC, 2015a).

The CQC essential standards of quality and safety comprise 28 regulations (and their associated outcomes) that are intended to help health and adult social care providers comply with the Health and Social Care Act 2008 (Regulated Activities) Regulations 2010, and the Care Quality Commission (Registration) Regulations 2009. Although technically healthcare organisations do not have to follow NICE guidance, they still have to demonstrate that they meet the recommendations set out in NICE clinical guidance (CQC, 2015a). Non-compliance with these CQC requirements may lead the CQC to

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[1] The CQC is a monitoring body that oversees hospitals, care homes, dental surgeries, GP surgeries and other providers of care, ensuring safe care

take any number of actions it deems fit under its remit. For the first instances of minor or moderate compliance breaches, the CQC uses 'requirement notices' (formally known as 'compliance actions') which comprise a request to the healthcare organisation for a report detailing how they will address the problem. If the 'requirement notice' fails to lead to improvements, or if the non-compliance is considered severe, the CQC has at its disposal a number of 'enforcement' actions, including but not limited to: issuing a warning, imposing or changing conditions of registration, suspending or cancelling registration, penalty notices and prosecutions (CQC, 2015b).

In contrast to the legislative requirement behind technology appraisals and the CQC mandate behind clinical guidelines, implementation of the NICE public health guidance is seen as an overall development goal which organisations should work towards, rather than a fundamental requirement. Therefore, it has fewer management and process pressures associated with it (NB, 2008).

2.2.2   The development process of NICE public health guidance

Thematically, the NICE public health guidance can focus either on a specific topic (such as alcohol misuse), a specific population (such as the elderly) or in a particular setting (such as schools). Typically, there may be two or more thematic areas (such as mental wellbeing in the workplace or smoking prevention in schools). The conceptual framework used for the public health guidance is made of four vectors (Figure 1 - Conceptual framework used by NICE public health guidance) which are linked to human behaviour: population, environment, society and organisations. The recommendations in the public health guidance are based on the effectiveness and cost-effectiveness of direct interventions, policies or strategies (NICE, 2012).

Figure 1 - Conceptual framework used by NICE public health guidance

Type of work and organisation creates physical, psychological and social conditions that can affect health

Healthy organisations are more productive

Cumulative experience of work and exposure to stressors influences vulnerability or resilience

Organisational vector

Life-course experience

Employees key to productivity, Competitiveness and wealth creation

Economic trends influence employment rates, job security and wages

Legislation safeguard rights protects health and safety

Population-wide vector

Health and wellbeing

Individual

Environ-mental vector

Physical, biological, chemical agents pose work hazards (such as dust or noise)

Exploitation of natural resources source of industry and business development and job creation

Sociocultural society vector

Work determines income and position in society

Other factors include: ethnicity, gender, age, discrimination, changing social attitudes and aspirations

Individual beliefs, attitudes & ability influence response to work

Resilience to 'stressors' (including health-related behaviour) affects long-term health and wellbeing

Source: NICE, 2012; p.25

From the scoping of a guideline to its publication, the development of NICE guidelines usually takes from 12 to 27 months, depending on the size and scope of the topic (NICE, 2014b). Prior to January 2015, NICE had different processes for developing different NICE guidelines. However, these differences were slight and mainly procedural or methodological, and the new NICE guideline development process merged these differences to create a greater sense of consistency (NICE, 2014b). The stages of developing NICE guidelines can be seen in Figure 2 below:

Figure 2 - The process for the development of NICE guidelines
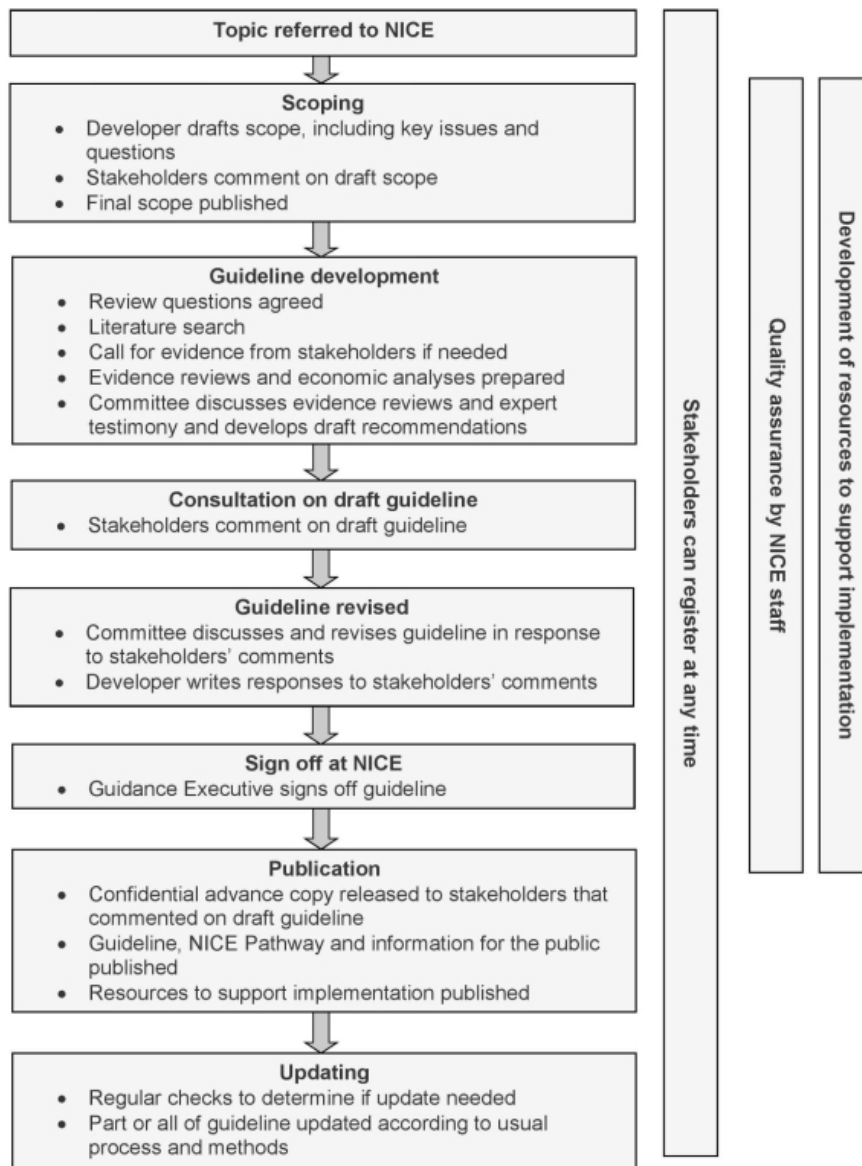
Source: NICE, 2014b

Each step above has its own transparent and specific process to ensure a systematic approach. For example, there are currently seven stages in the development of a guideline scope (NICE, 2014b). Each of these stages in turn has its own process, which can be found on the NICE website within the relevant section (NICE, 2014b).

The key questions that guide the scope form the basis of the research questions for the reviews of evidence. For example, a research question on a public health problem may require a review of epidemiological evidence. The guidance would have a number of reviews depending on the number of research and key questions. Evidence is critically appraised using a rigorous and well-established systematic critical appraisal process (Baker et al, 2010) with expert reviewers and methodologists to grade evidence and ensure that their recommendations are based on the best current available evidence. The draft guidance is then sent to stakeholders for consultation, then reassessed and refined further after feedback. A business case is then developed to help stakeholders implement the guidance in their local context. Other accompanying documentation is also developed – for example, template presentations – depending on the guidance.

2.2.3 NICE Implementation Division[2]

The Implementation Division is part of the Health and Social Care directorate at NICE, which is also responsible for the NICE quality standards (NICE, 2015b). The Implementation Division at NICE has three strategic aims (NB, 2008):

1. To motivate and encourage change by developing a supportive environment for implementation. This is achieved by working with agencies at the strategic level.

2. To provide practical support that aims to meet user needs.

3. To evaluate or commission and monitor the uptake and impact of NICE guidance and its implementation support.

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[2] During this research, I had a number of meetings (January – August, 2010) with staff at the Implementation Division, and shadowed an implementation consultant (27 January, 2010). The following information is gleaned both from formal NICE documentation (where referenced), and through my meetings and shadowing.

To help meet these aims, the Implementation Division:

1. Provides tools that help in the implementation of the guidance. These tools include slide sets, education materials, baseline assessments, commissioning tools, clinical audits and cost impact analyses (NICE, 2015j).

2. Provides tailored implementation support that identifies barriers to implementation of a particular piece of guidance (NICE, 2014a).

3. Provides a database of studies and reports on the uptake and implementation of NICE guidance (NICE, 2015k).

4. Provides reports on the uptake of guidance in order to inform the implementation strategy and guidance development (NICE, 2014a).

5. Engages with stakeholders and new audiences, raising awareness of the guidance, promoting the key messages of NICE and particular pieces of guidance, obtaining feedback on the recommendations and relaying such feedback to the implementation division (NICE, 2014a).

Every year, the Implementation Division assesses its objectives for engagement and considers how these objectives will be delivered and measured. These are then published in their annual report (NICE, 2014a). The objectives are developed by considering emerging changes in the health and social care system as well as forthcoming NICE guidance and standards. The objectives are then circulated within NICE, to allow other teams and directorates to highlight specific areas they would like covered in site visits. This process is not linear; the Implementation Division meets with other teams at NICE in the development stage of its strategy and objectives (NICE, 2014a).

The Implementation Division engages with other teams at NICE during the development of a set of guidelines to ascertain the likely barriers to implementing its recommendations and to inform its implementation strategy (NICE, 2014a). This is also done by examining the results of the consultation process. This consultation phase also allows NHS Trusts and other organisations time to prepare for implementing the recommendations. The Implementation Division does not prepare or assist NHS

Trusts and other organisations in advance of the guidance being launched. In addition, the Implementation Division is not directly responsible for the implementation of NICE guidance, has no role in compliance or inspection and cannot enforce NICE recommendations.

Whilst the Implementation Division can help NHS Trusts (and other actors) implement NICE recommendations, it is a cooperative relationship, mainly initiated by NHS Trusts (JR, 2009). One of the reasons the Implementation Division cannot and does not enforce recommendations is because employing a more powerful leverage to pressurise Trusts to disseminate or implement NICE recommendations may jeopardise the contribution of Trusts to the consultation phase of the guideline development process. NICE believes that if it both develops guidelines and enforces the implementation of those guidelines Trusts may be more inclined to seek to make the recommendations as easily attainable as possible (NB, 2008). Even without enforcement powers, NICE still runs the risk of losing cooperation and alienating stakeholders during the guideline development process if it places too much pressure on Trusts in terms of implementation. The strategy and powers of the Implementation Division can therefore better be seen in terms of advocacy (NB, 2008).

In 2013, there were eight implementation consultants working within the Implementation Division. Each consultant is responsible for site visits and stakeholder relationships within a given geographical region, in total covering the whole of the UK (NICE, 2014a). The consultants visit NHS Trusts to:

- Get feedback on how they (the Trusts and NICE) are implementing the NICE guidelines

- Update the Trusts on what NICE is doing in general

- Gain feedback from the Trusts on how NICE can improve on a range of issues

- Ask Trusts what they would like to see from NICE in terms of guidance, implementation support or other matters (NICE, 2014a).

The visits from the implementation consultants are typically with NHS Trust boards or with senior managers on a 1:1 basis, either face-to-face or by telephone or video conference. Each visit or

engagement is structured around a visit framework which sets out a plan of the type of questions the implementation consultants may want to get answers to and the kind of information they may want to share with others. In this outreach capacity, the NICE implementation consultants clarify guidance and give implementation advice, but do not state whether it is acceptable to do a certain thing over and above the guidance, and do not give advice on something that is not in or contradicts the guidance. In addition, NICE does not say how, whether or what to prioritise between different guidelines and different recommendations. The aim of this stance is to reduce the risk of mixed messages, contradictions and implementation errors, as well as to give Trusts the flexibility to implement the guidelines as they see fit (NB, 2008).

The role of the implementation consultants is a two-way process, with feedback from stakeholders relayed anonymously to NICE headquarters. Nevertheless, the overall communication strategy from the Implementation Division is top-down and NICE anticipates that senior managers in NHS Trusts will disseminate the discussions they have with the NICE implementation consultants throughout the rest of the Trust where relevant.

Reports and recommendations for action are given to NICE's Senior Management Team every quarter, and an annual report presented to NICE's Board. The annual report is publicly available (NICE, 2014a). These reports are compiled from the fieldwork of the implementation consultants, though it is unclear what methods are used to gather the information over and above informal interviews and anecdotal evidence. The main way NICE evaluated its implementation strategy is from the information gathered by the implementation consultants in their fieldwork (NICE, 2014a).

2.3 How the NICE guidance was chosen

I chose to explore the diffusion of NICE guidance for my PhD because of the status of NICE as the dominant evidence-based health guideline body in England, and because its transparent methodology makes data from NICE easily obtainable. I was interested in NICE public health guidance as opposed

to NICE clinical or health technology guidelines because there is relatively little research on the dissemination and implementation of this type of guidance. I was particularly interested in the NICE workplace public health guidance because at the time I started my PhD, the NHS was going through a major introspection of workplace health and wellbeing in the NHS (Boorman, 2009a; 2009b). This meant that there was an opportunity for the potential policy implications of my research to meet the zeitgeist in implementing workplace health and wellbeing innovations.

In order to meet my research objectives, particularly in describing the processes of dissemination and implementation, it was important to explore the implementation of more than one piece of guidance in order to introduce the variability needed for high quality analysis (Yin, 2014). In addition, I chose to look at more than one piece of NICE workplace guidance because it would provide an opportunity to explore different contexts of similar guidance and therefore gather richer data. Whilst it would have been interesting to compare the implementation of one piece of NICE workplace guidance with a different type of NICE guideline (such as a clinical guideline), doing so would have increased the scope beyond the resources at my disposal, as clinical guidelines are disseminated to different areas, and implemented by different groups, in NHS Trusts.

In deciding how many pieces of NICE workplace guidance I should study, the issues I considered were:

1. How to balance the number of pieces of guidance being studied with the number of Trusts being studied; namely, what combination of Trusts/guidance should be used. Issues considered included:

   a. The resource and project constraints

   b. The need for methodological rigour and research detail, rather than low-level detail and breadth of cases

   c. Whether a combination of more Trusts/fewer pieces of workplace guidance was more desirable than fewer Trusts/more pieces of workplace guidance.

2. Which pieces of NICE workplace guidance were suitable for shortlisting.

Based on the above criteria, I chose to study two pieces of NICE workplace guidance. The shortlisted guidance from which I made my selection comprised:

1. 'Managing long-term sickness absence and incapacity for work' (NICE, 2009c)

2. 'Promoting physical activity in the workplace' (NICE, 2008a)

3. 'Promoting mental wellbeing through productive and healthy working conditions' (NICE, 2009a)

4. 'Workplace interventions to promote smoking cessation' (NICE, 2007b)

5. 'Obesity prevention' (NICE, 2006)

6. 'Physical activity and the environment' (NICE, 2008g).

Random selection of the workplace guidance, whilst it would have eliminated selection bias, was not appropriate as it might have resulted in guidance being chosen that would not meet my aims and objectives (as I state below, the obesity guideline would not have been appropriate). Although purposively choosing the guidance may introduce selection bias, I hope to mitigate this somewhat by providing transparency in my choice process. No set exclusion criteria were used in choosing which workplace guidance I would study. Instead, a decision was made based on the individual characteristics and contexts of each piece of guidance.

From the above shortlist, the obesity guideline was excluded because NICE categorised it as a clinical guideline rather than public health guidance and because it was not aimed solely at the workplace setting. The smoking cessation guidance was excluded because it was launched in 2007, at the same time that smoking was banned in indoor public places. This meant that it would have been difficult to determine the extent of the influence of the NICE smoking cessation guidance as it coincided with major legislative externalities.

I wanted the NICE guidance I studied for my research to have been published in different years. This was in order to explore potential changes in processes of dissemination and implementation between

each piece of guidance, as time would have elapsed between them. Given that the obesity guidance and smoking cessation guidance were excluded for the reasons stated above, this left two pieces of guidance published in 2008 and two in 2009.

Of the 2008 guidance, the 'Promoting physical activity in the workplace' (NICE, 2008a) guidance was chosen above the 'Physical activity and the environment' (NICE, 2008g) because the latter fell beyond the workplace health and wellbeing scope of my research.

The 'Promoting mental wellbeing through productive and healthy working conditions' (NICE, 2009a) guidance was chosen above 'Managing long-term sickness absence and incapacity for work' (NICE, 2009c) because NHS Trusts have sickness absence policies and have access to occupational health and human resources departments, so I considered that studying the sickness absence guidance would meet confounders that would be particularly difficult to untangle.

2.3.1 NICE 'Promoting physical activity in the workplace'

The NICE 'Promoting physical activity in the workplace' guidance was requested by the Department of Health and is linked to a number of government targets, including a 20% reduction in the number of cases of work-related ill health and a 30% reduction in the number of working days lost per worker as a result of work-related injury and ill health in the civil service and public sector (NICE, 2008a). The physical activity in the workplace guidance is set within the wider public health context of physical activity and inactivity, and states that 20 conditions and diseases can either be prevented or managed by increasing physical activity. The guidance states that around 65% of men and 76% of women do not meet the national recommendations of 30 minutes of moderately intensive physical activities on 5 or more days a week. Sickness absence is also mentioned, the guidance stating that, while sickness absence is mainly the result of mental health and musculoskeletal problems, physical activity can reduce common mental health problems and therefore sickness absence (NICE, 2008a).

The areas covered in the guidance include workplace-based physical activity initiatives that can be made applicable to the English setting, and initiatives outside the workplace but linked to employers (such as lunch-time walks, employer-subsidised sports, and active travel schemes) (NICE, 2008a). The guidance does not cover physical activity policies that require modifications to the environment, since that was covered in the guidance 'Physical activity and the environment' (NICE, 2008g). The target audience for the guidance is adults in work. Groups excluded from this particular guidance are the self-employed, the unemployed and those requiring specialist medical advice. The evidence appraised for the guidance had to demonstrate outcomes such as participation rates, physical activity levels and the motivational factors involving physical activity (NICE, 2008a). Details of the physical activity guidance, including its recommendations and implementation resources, can be found in Appendix A.

2.3.2 NICE 'Promoting mental wellbeing through productive and healthy working conditions'

The NICE 'Promoting mental wellbeing at work' guidance was requested by the Department of Health. The guidance is aimed at those who have a direct or indirect role or responsibility for promoting mental wellbeing at work. This includes businesses and organisations of any size and in any sector. The guidance states that it may also be of interest to human resource or occupational health professionals, as well as employees, trade unions and members of the public (NICE, 2009a).

The mental wellbeing in the workplace guidance is set within the public health context of mental wellbeing in the workplace. The guidance states that whilst there were around 6500 new cases of work-related mental ill health in 2005, the figure was most likely an underestimate of the actual situation. The guidance further states that, in 2006 and 2007, more than half a million people in Britain were believed to be suffering from work-related mental ill health in the form of stress, anxiety or depression (NICE, 2009a). The guidance is clear that work has an important part to play in the promotion of mental wellbeing, and it therefore aims to balance the mitigation of the risks for mental

wellbeing of poor working conditions with the initiatives that can be implemented by workplaces to promote higher levels of mental wellbeing.

Unlike the physical activity in the workplace guidance, the mental wellbeing in the workplace guidance does not explicitly set out exclusion criteria for its scope. As a result, it is unclear what is and is not covered in terms of settings and initiatives, and which groups are not covered by the guidance. Details of the mental wellbeing guidance, including its recommendations and implementation resources, can be found in Appendix B.

2.4 The Boorman Review

The Boorman Review (2009a) argues that 'NHS organisations must invest in the health and wellbeing of their workforce if they are to deliver sustainable, high quality services' (Boorman, 2009a, p.28). It was produced following the writing an Interim Report (2009b) and a consultation process to gauge reaction to the Interim Report (and design local implementation recommendations). Overall, the Boorman Review provides 20 recommendations in three categories: 'improving organisational behaviours and performance', 'achieving an exemplary service', and 'embedding staff HWB in NHS systems and infrastructure' (Boorman, 2009a, p.6). Whilst the Boorman Review is not the first review to look at the health of the NHS workforce (see, for example, Williams, et al, 1998), earlier attempts failed to gain the traction needed to result in any significant change, although the reason for this has not been studied. The Boorman Review contextualises itself within the quality and productivity challenge facing the NHS, and argues that good staff HWB is integral to meeting these challenges. The Boorman Review argues that staff HWB is both beneficial for staff and for achieving high standards of patient safety, patient experience and patient outcomes (Boorman, 2009a). Additionally, it makes the point that having an HWB culture throughout the NHS will allow staff to develop skills that will be useful for working with the wider community. This would mean leading by example, being proactive

in the health promotion of their patients and being able to give better first-hand advice (Nelson et al, 2013; Boorman, 2009a).

The Boorman Review argues that NHS organisations have hitherto not given staff HWB enough priority at organisational or local management level, and states that the view of many Trusts (although the Review did not state how many Trusts) is that spending on staff HWB is a poor use of scarce resources. Additionally, the Boorman Review argues that the HWB policies adopted by Trusts are not able to provide the HWB services that staff need. Following this argument, one of the overall messages of the Boorman Review is that improving the HWB of the NHS workforce requires senior management ownership and buy-in, forward planning and staff engagement (Boorman, 2009a). This closely mirrors the recommendations of the NICE physical activity and NICE mental wellbeing workplace guidance (NICE, 2008a, 2009a). Indeed, the Boorman Review recommends that NHS Trusts implement the NICE mental wellbeing guidance, and states that implementation of the NICE mental wellbeing guidance is 'part of their duty of care to their employees' (Boorman, 2009a, p.11) and that implementation of mental wellbeing at work strategies should be assessed and monitored. In addition to directly recommending the implementation of the NICE mental wellbeing guidance, other recommendations in the Boorman Review echo a number of recommendations stated in the NICE mental wellbeing at work guidance. For example, the Boorman Review, like the NICE mental health in the workplace guidance, states that organisations should identify and tackle staff mental health issues early. Likewise, both the Boorman Review and the NICE mental wellbeing guidance emphasise the importance of management training in HWB, and the need to have HWB in performance and personal development planning (Boorman, 2009a; NICE, 2009a). Finally, the Boorman Review stresses that the HWB initiatives that Trusts deliver to their staff should align themselves with wider public health policies (Boorman, 2009a).

2.5 The Royal College of Physicians audit of the NICE workplace guidance

A Royal College of Physicians (RCP) audit in 2011 was the first national audit on the implementation of NICE workplace guidance in NHS Trusts (RCP, 2011). This was followed by a second round of audit in 2014 (RCP, 2014). The RCP department conducting the audit was closed in August 2014 (RCP, 2015), with no indication that the audit will enter into a further round. The audit reports do not make clear why they were undertaken, although the Boorman Review stated that the implementation of NICE workplace HWB guidance should be assessed and monitored (Boorman, 2009a). The audits measure six pieces of NICE guidance:

1. 'Managing long-term sickness absence and incapacity for work' (NICE, 2009c)

2. 'Promoting physical activity in the workplace' (NICE, 2008a)

3. 'Promoting mental wellbeing through productive and healthy working conditions' (NICE, 2009a)

4. 'Workplace interventions to promote smoking cessation' (NICE, 2007b)

5. 'Obesity prevention' (NICE, 2006)

6. 'Physical activity and the environment' (NICE, 2008g).

The aim of the audits was to measure the extent and quality of the implementation of NICE workplace guidance. This measurement was achieved through an audit tool (see Appendix C), which was a questionnaire with mainly closed yes/no response categories. The questions in the audit tool related directly to the recommendations and actions in the NICE workplace HWB guidance. For example, the first recommendation in the NICE 'Promoting physical activity in the workplace' guidance states that employers should 'develop an organisation-wide plan or policy to encourage and support employees to be more physically active' (NICE, 2008a, p.5). Consequently, the audit tool asks whether such a plan exists, giving yes/no and 'incomplete' response categories (RCP, 2011; 2014). The audits did not measure all the recommendations from all the NICE workplace guidance. Instead, the design of the

audit tool took the following into account: how the recommendation could be posed as a question; how to ensure the interpretation of the question was consistent amongst respondents; what response categories can be used to deliver meaningful answers; and the length and time it would take to complete the audit (RCP, 2011; 2014).

Table 2 below sets out the number of Trusts participating in the first and second rounds of the RCP audit. All NHS trusts in England were eligible to take part in the audits. Primary Care Trusts (PCTs) were included in only the first round of the RCP audit (with 108 PCTs participating in the first round). Excluding PCTs, 239 NHS Trusts were identified in the first round of audit, and a total of 172 NHS Trusts participated, representing a 72% participation rate (RCP, 2014). In the second round of audit, 244 NHS Trusts were identified and 178 participated, representing a 73% participation rate (RCP, 2014). The number of Trusts participating in either round one or round two of the audit totalled 221. The number of Trusts participating in both round one and round two totalled 123. It is difficult to ascertain whether the participation rates for the NICE workplace audits signify a high level, as there are no similar audits with which to make a comparison. However, a clinical audit run by the RCP on the depression screening and management of staff on long-term sickness absence had a participation rate of 69% out of 389 identified Trusts, and this was considered high (Royal College of Physicians, 2009). A high participation rate for the RCP audit on the implementation of NICE workplace guidance may signify the level of importance Trusts attached to implementing NICE workplace guidance, or may signify other factors such as the ease of use of the audit tool, the effectiveness of the audit data gathering process, a positive attitude by Trusts towards the RCP or other factors.

Table 2 - Participation for the first and second rounds of audit

Trust type	Number of Trusts	
	Round 1	Round 2
Acute	122	124
Ambulance	10	4
Mental health	39	23
Mental health and community	n/a	12
Acute and community	n/a	5
Community care	n/a	7
Other	1	3
Total	**172**	**178**

Source: Royal College of Physicians, 2014 (NB: Percentages were not given by the RCP for the information in this table because the dominator for some Trust types was unknown due to the changing structures of some Trusts

2.5.1 Findings

Each Trust was asked to nominate a health and wellbeing lead for the audit, preferably at board level, to submit the audit data. Where no lead was nominated, the request was sent to the Chief Executive's office or Director of Human Resources. The audit identified a wide national variation in the implementation of NICE workplace guidance, both between the guidance and across all participating Trusts.

Organisation-wide plans and board-level engagement in HWB were key issues in the RCP audits (RCP, 2011; 2014), and echoed the importance placed by NICE and the Boorman Review on senior-level engagement (NICE, 2008a and 2009a; Boorman Review, 2009a). Table 3 below shows the total number of Trusts responding to the audit that had an organisation-wide plan or policy in the areas of the NICE workplace guidance.

Table 3 – Number of Trusts that had an organisation wide plan or policy on areas of the NICE workplace guidance

Does the Trust have an organisation-wide plan or policy on?		
	Round 1 n (%)	Round 2 n (%)
Overall health and wellbeing	70 (41)	115 (65)
Physical activity	**41 (24)**	**79 (44)**
Mental wellbeing	**83 (48)**	**101 (57)**
Obesity	23 (13)	50 (28)
Smoking	129 (75)	134 (75)
Long-term sickness absence	172 (100)	178 (100)

Source: Royal College of Physicians, 2014; p.7

Table 3 shows that a relatively low percentage of Trusts had an organisation-wide plan or policy for physical activity and mental wellbeing when compared to smoking and long-term sickness absence. Table 3 also shows that in round 2 of the audit, a higher percentage of Trusts had an organisation-wide plan or policy for overall health and wellbeing, physical activity, mental wellbeing, and obesity, when compared to round 1. In addition, an equal percentage of Trusts had an organisation-wide plan or policy for smoking and for long-term sickness absence when compared to round 1. The reason for this increase was not made clear in the audit report, nor was it clear whether the increase was a result of Trusts participating in round 2 and not round 1 (RCP, 2014).

Table 4 – Number of Trusts that had an organisation-wide plan or policy signed off by the Board

Among those that said they had a plan, has the plan or policy been signed off by the board?		
	Round 1 n (%)	Round 2 n (%)
Physical activity	**28/41 (68)**	**50/79 (63)**
Mental wellbeing	**69/83 (83)**	**88/101 (87)**
Obesity	13/23 (57)	35/50 (70)
Smoking	115/129 (89)	117/134 (87)
Long-term sickness absence	Not asked	171/178 (96)

Source: Royal College of Physicians, 2014; p.7

Table 4 above shows how many Trusts – out of the total number of Trusts that had an organisation-wide plan or policy in the areas of the NICE workplace guidance – had a plan or policy signed off by their board. In round 2, a lower percentage of Trusts had a physical activity plan or policy signed off by the board when compared to round 1. A higher percentage of Trusts had a plan or policy signed off by the board for mental wellbeing, obesity, and smoking cessation. In round 1, board-level sign-off for physical activity and mental wellbeing policies was higher than for obesity plans but lower than for smoking cessation plans. In round 2, board-level sign-off was the lowest for physical activity out of the stated areas, but board-level sign-off for mental wellbeing was joint second. As with Table 3, the reasons behind the variation between the first and second round of audits was not explored (RCP, 2014).

The audit reports did not routinely break down the results by Trust type (RCP, 2011; 2014). However, of note, the 2011 audit report highlighted that most of the Trusts (85%) that did a needs assessment in the last three years for mental wellbeing were mental health Trusts (though this was not compared to other types of Trusts), and 48% of PCTs had done a needs assessment in the last three years for physical activity, compared with 32% of acute Trusts (RCP, 2011). The audit did not discuss why such variation between Trust types manifested.

2.5.2 Limitations of the audit

One of the main strengths of the two rounds of audit was that they measured whether Trusts have or are developing policies that meet the recommendations in the NICE workplace guidance. The audits also showed variation of implementation within each piece of guidance (some recommendations were implemented more than others), between pieces of guidance, and between Trusts. Additionally, the audits helped raise awareness of the issue of measuring and monitoring the implementation of NICE workplace HWB guidance. However, the audits also contained certain limitations.

Audit tool
The audit tool had two main limitations. Firstly, the tool utilised a closed format questionnaire with mainly 'yes/no' response categories. Whilst the omission of an open format response option makes analysis more manageable, it also makes it difficult to explore more complicated issues (such as the 'how' and 'why' of a topic). However, increasing the ease of response is a common approach to reducing barriers to effective audits, such as perceived lack of time and lack of resources by audit participants (Ovretveit, 2005; Harvey and Wensing, 2003; Johnston et al, 2000). Given that the scope of RCP's audit was to simply measure the implementation of the NICE workplace guidance in a way that would reduce the burden on respondents and ensure that it could be repeated in cycles, the choice of response category was sufficient for this aim.

Secondly, the audit tool required Trusts to submit their own data, which was not corroborated by the RCP (RCP, 2011). This may have led to submission errors or inconsistencies in the way different Trusts interpreted certain data, evidence or questions. For example, the use of 'in development' as a response category in the audit tool could have been interpreted by Trusts in a number of ways. One Trust may have answered 'in development' for a policy that was ready to launch within two weeks, whilst another Trust may have answered 'in development' for a policy that was still in the conceptual phase.

Influence

The audits identified whether a NICE recommendation was or was not being met by NHS Trusts. However, they did not show how Trusts implemented the recommendations (for example, the steps that were taken in implementation and the events that resulted from these steps) or why they were or were not implemented. As a result, the audits did not demonstrate whether the NICE recommendations were implemented in their own right, or were met by virtue of being associated with other external policies or initiatives. For example, a Trust may have met a recommendation from the physical activity guidance, not because it was aware of the NICE guidance and spent resources to implement the recommendation, but because as part of a different initiative the Trust was already doing what was being recommended by NICE. Therefore, the audits did not explore the extent of the influence of the NICE guidance on Trust workplace HWB policies. Knowing the extent to which the guidance influences Trust policies and the processes by which Trusts react to NICE can give policy makers a clearer idea of the impact of the NICE guidance.

Other limitations

Another limitation of the audit is the single-level (organisation-wide) data that it represents. The audit does not provide information below the Trust level, such as Trust staff (for example, to whom the NICE workplace guidance was disseminated), nor does it provide information above the Trust level, such as NICE (for example, NICE approach to disseminating the workplace guidance). This multi-level approach was outside the scope of the audit, but is a gap I have attempted to fill through my conceptual framework. As I describe in more detail in Chapter 3, a multi-level approach to exploring the implementation of NICE workplace guidance would allow for a richer analysis of the processes and context involved.

Finally, the anonymisation of the audit data – whilst perhaps a necessary factor for increasing Trust participation rates in the audit – means that independent observers cannot critically evaluate the integrity of the data.

2.6 Conclusion

NICE has an extensive list of published guidance in a number of different areas. The development of NICE guidance follows robust processes, and is complemented by initiatives to encourage implementation. However, there is a lack of detailed qualitative research on the processes of disseminating and implementing NICE workplace guidance. NICE has a database of reports published on the implementation and uptake of its guidance (NICE, 2015k). Of the 109 pieces of guidance that have uptake reports, eight are public health guidance; of these, two are workplace guidance ('Workplace interventions to promote smoking cessation', NICE 2007a; and 'Promoting mental wellbeing at work, NICE 2009a). However, this leaves out the two other pieces of NICE workplace guidance: 'Management of long-term sickness and incapacity for work' (NICE, 2009c) and 'Promoting physical activity in the workplace' (NICE, 2008a). I was aware that there are uptake data on the NICE physical activity in the workplace guidance and management of long-term sickness guidance in the form of the RCP audits (2011, 2014), and it was unclear why the database omitted uptake data from these two pieces of guidance. To ensure that I did not miss any reports on implementation of NICE workplace guidance, I looked at the uptake data on the webpage for individual workplace guidance. The uptake data for each of these pieces of guidance were more detailed on their individual web pages. However, it was apparent that the only research identified by NICE with regard to the implementation of their workplace guidance related to the RCP audits (2011, 2014).

In addition to searching the NICE uptake database and individual guidance web pages, I ran a search for NICE workplace guidance in PubMed and the British Nursing Index (BNI). The search term I used was 'NICE AND workplace'. This resulted in 15 articles in PubMed and six in BNI. After duplicates were removed, only one paper was published on the implementation of NICE workplace guidance, and this was a summarised version of the RCP audit findings (Preece et al, 2012). A further paper was published on workshops to improve the implementation of NICE workplace guidance, but this paper was also

attached to the RCP audit (Jones et al, 2015). Ultimately, there is a lack of research on the implementation of NICE workplace guidance.

None of the published research (i.e. the RCP audits) used qualitative methodology, none explored implementation in detail (such as how implementation of the guidance occurs), and none examined whether meeting the guidance recommendations was a result of the influence of the guidance or due to other factors. The published studies assess levels of adherence to NICE guidance, but largely overlook why this level of adherence occurs and, if necessary, how to improve them.

My research seeks to explore the processes of dissemination and implementation of NICE workplace guidance within NHS acute Trusts. The following two chapters will discuss the diffusion of innovation element of my research, particularly my use of the Greenhalgh et al model (2004a) as my conceptual framework. Following this, I will discuss the methodological design and approach I adopted. The differing objectives and methodologies between my research and the RCP audits mean that my research can add value to the audit findings and help meet the gaps left by the audit limitations.

3. Literature review

3.1 Introduction

The aim of my literature review was to determine the most applicable model for the exploration of the processes of dissemination and implementation of NICE workplace guidance. Following a hand search of journals, reference and citation tracking, and a systematic search of electronic databases, four key models emerged: the Greenhalgh et al model (2004a); Normalisation Process Theory (May, 2013a; 2013b); Promoting Action on Research Implementation in Health Services (PARIHS) (Helfrich et al, 2010); and the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al, 2009). This chapter is a narrative synthesis of these four key models. After describing each model in turn, I discuss the models in greater depth. In particular, I discuss the operationalisation of the models as well as the applicability of these models to my research aims and objectives. I then briefly outline why I chose the Greenhalgh et al (2004a) model for my conceptual framework.

3.2 Rationale and scope

During my preliminary reading for my PhD, it became apparent that the plethora of research on the dissemination and implementation of guidelines has largely focused on clinical and health technology guidelines and on the barriers and facilitators to the implementation of recommendations by healthcare professionals (Grimshaw et al, 2004; Cullum et al, 2004; Davies et al, 2010). This focus also extends to NICE guidance. For example, Cullum et al (2004) undertook questionnaires and interviews with clinicians to explore the dissemination and implementation of NICE guidance, but did not explore the implementation of any of the NICE workplace guidance (although it should be noted that there was no NICE workplace guidance published at the time of the Cullum et al review), nor did they explore the implementation of NICE guidance from an organisational perspective. Cullum et al (2004) concluded that the reasons for varied implementation of the NICE clinical and health technology guidelines were: inertia on the part of key stakeholders or lack of clinical skills; disagreement on the

part of clinicians with the methodology used by NICE or their results; lack of skills in implementing behavioural and organisational change; differences in local opportunity costs for implementing the guidance; and patient choice not conforming to the guidance (Cullum et al, 2004).

Though valuable lessons may be learned from the guideline implementation literature base, I grounded my literature review and PhD within the diffusion of innovation research base because it allowed me to explore the implementation of a guideline through a different conceptual framework than traditional guideline implementation research. In doing so, I was able to conceptualise guidelines as 'innovations', rather than documents containing evidence statements. In the previous chapter, I highlighted the lack of research on the dissemination and implementation of NICE workplace guidance. By using a diffusion of innovation model for my conceptual framework, I may add to our understanding of the applicability of the diffusion of innovation model in exploring the dissemination and implementation of workplace guidance in NHS Trusts. Ultimately, I heeded Damschroder et al's advice that 'more research is needed into what works where and why' (2009, p.2).

My review is focused on the conceptual models used in diffusion of innovation. Conceptual models can help explain the complexities and interconnectedness of constructs in diffusion of innovation. This is useful when identifying and exploring processes and the 'why' and 'how' of the diffusion of innovations (Emmons et al, 2012). However, as other authors have noted, the amorphous nature of diffusion of innovations research means that defining a scope and demarcating what is and is not a conceptual model within the diffusion of innovations domain presents a considerable challenge (Greenhalgh et al, 2004a; Damschroder et al, 2009). Diffusion of innovations literature sits within the wider literature on implementation science and, consequently, models in implementation science that focus on dissemination and implementation can be used to explore the diffusion of an innovation (Greenhalgh et al, 2004a; Tabak et al, 2012). Nevertheless, a degree of pragmatism and subjectivity is necessarily exercised in identifying models for inclusion.

It is important to highlight that 'theories' and 'frameworks' are separate and distinct concepts, with debate surrounding what they mean. Theories have been described as a systematic way of explaining or predicting events or behaviours through inter-related concepts, definitions and propositions. In addition, theories are abstract and not specific to a particular content or topic. Conversely, frameworks are strategic or action-planning models that can help systematically develop, manage or evaluate interventions (Tabak et al, 2012). Damschroder et al (2009) use the terms 'theories' to also encompass models and conceptual frameworks. Because of the lack of consensus on the use of the terms 'theories', 'frameworks' and 'models', my literature review encompassed all three types, provided they had also been depicted pictorially or through other condensed means such as tables.

3.3 Literature review aims and objectives

Through my literature review I seek to answer the following question: what diffusion of innovations model is applicable for the exploration of the processes of dissemination and implementation of NICE workplace guidance?

My objectives are as follows:

1. Identify conceptual models in the diffusion of innovations research base.

2. Obtain an understanding of the conceptual models in the diffusion of non-technological innovations in healthcare organisations.

3. Obtain an understanding of the current debates around constructs in diffusion of innovations research.

4. Choose a conceptual model that will help me meet the aims and objectives of my PhD – for example, by providing thematic guidance for my semi-structured interviews and coding framework, by providing a framework for rich and in-depth exploration of the NICE workplace guidance, and by generating the opportunity to add value to the literature base.

3.4 Approach to the literature review

Noyes and Lewin (2011) recommend that the method of literature synthesis should follow two main considerations. Firstly, it is important that the synthesis is able to address the question that is being asked. Noyes and Lewin (2011) recommend that if the question requires more conceptual outputs, an interpretative approach such as narrative analysis may be more appropriate. However, if the question requires the aggregation of data to answer more practice-specific questions, then integrative or aggregative approaches such as thematic analysis may be more appropriate. The second issue to consider when choosing a method of literature synthesis is the type of data that is likely to be available. For example, meta-ethnographic syntheses are typically more suitable for primary studies with thick descriptions, whilst thematic syntheses may be more suited to studies that focus on process evaluations (Noyes and Lewin, 2011).

In their narrative review of dissemination and implementation models, Tabak et al (2012) outline the plethora of models that are potentially relevant to exploring the dissemination and implementation of interventions, innovations and research. In total, 61 models were categorised and included in their review from the 109 initially found (Tabak et al, 2012). However, Tabak et al's review did not provide enough information about each model for me to choose which model would be relevant for my research aims and objectives, and I had insufficient resources to review all 61 models myself. Therefore, I had to approach the aims and objectives of my literature review in a different way. One of my objectives was to find models that have either been developed through a systematic search of diffusion of innovation models, or that have systematic reviews behind them. This was a way of finding the most prominent models.

Because my literature review question is to decide on the most appropriate conceptual model for my research, I have chosen an interpretative approach, a number of which are available. As I was specifically seeking reviews of models and constructs in the diffusion of innovations, rather than

primary data, and because I expected that the number of reviews that would emerge would be small and of mixed quality and data, a narrative review was the most appropriate approach. Narrative summaries select and order evidence to produce a narrative account of findings, and can be used alongside systematic searching and critical appraisal techniques (Dixon-Woods et al, 2004; Dixon-Woods et al, 2005). Importantly, narrative summaries provide flexibility and, whilst they can be purely descriptive, they can also be interpretative, offering complex commentaries and juxtapositions. Whilst this characteristic is not exclusive to narrative summaries, they are useful when synthesising diverse forms of evidence (Dixon-Woods et al, 2005; Dixon-Woods, 2007).

Greenhalgh et al (2004a) conducted a meta-narrative synthesis on their mapping and review of the diffusion of innovations in healthcare organisations. They argued that narrative syntheses are appropriate because the diffusion of innovation research base is typified by its amorphous nature and lack of consensus on definitions (Greenhalgh et al, 2004a). In addition, they argued that traditional systematic search of electronic databases should be complemented by non-systematic searching, a hand search of journals, and reference and citation tracking in order to potentially capture a greater number of relevant papers. This approach has been used in other reviews where the literature base is typified by studies with a diverse range of designs and approaches (Strech et al, 2008).

Box 1 below outlines my literature search and review process. I adapted this process from the Greenhalgh et al review (2004a), taking into account my research aims and objectives. This meant reducing the planning phase to defining a focused and less open research question and eliminating the mapping and synthesis phases to reflect a narrower project scope and limited resources. I had initially considered using a critical appraisal framework (such as the Critical Appraisal Skills Programme checklist, (2013)) to assess the quality of the papers I found, but reached the decision that, because the focus of my review was on the conceptual analysis of models and their applicability to my research rather than on the evidence or quality of the papers behind them, it was not appropriate to divert

resources to critically appraising papers. However, I do comment where relevant on the quality of papers.

Box 1 - Process for literature search and review

> **Planning phase**
>
> - Outline the question that will guide my literature review and allow for a focused search.
>
> **Search phase**
>
> - Conduct an exploratory phase of literature searching, guided by expert suggestions and 'browsing', which will help provide a more fruitful critical appraisal phase.
> - Conduct hand searches of key journals.
> - Conduct a systematic literature search of electronic databases using a defined search string.
> - Conduct citation and reference tracking to identify potentially relevant papers missed by systematic and hand searches.
>
> **Appraisal phase**
>
> - Evaluate papers for their validity and relevance to the research question
> - Extract and collate the key results

3.4.1 Non-systematic searching

I undertook non-systematic searching (i.e. 'browsing') prior to my systematic literature search. This helped ground my review and discussion of conceptual models in the diffusion of innovation literature base. In large part, the browsing followed suggestions by experts in the field who pointed me towards seminal papers that would have been missed by my systematic search due to my inclusion and exclusion criteria.

3.4.2 Inclusion and exclusion criteria

My inclusion criteria were broadly adapted from the inclusion criteria in the Greenhalgh et al (2004a) review as they dealt with an amorphous literature base and demonstrated the necessity of adopting a pragmatic approach to inclusion criteria for such literature. I purposefully did not have narrow

inclusion criteria, such as including papers only to do with a model used in the context of NHS acute Trusts, because I wanted enough flexibility to capture relevant papers.

Because of the plethora of models that exist, I only included models if they were the sole focus of a review (systematic or non-systematic). Consequently, models that were included in a review exploring multiple models were excluded. Models were only included if the review looked at the use of that particular model in the literature. This criterion was a means for choosing prominent models. Additionally, I included models that were developed through a systematic review of other models in diffusion of innovation research. The purpose of including this criterion was to provide a way (albeit arbitrary) of choosing robust models. The criteria set out in Box 2 are fundamentally based on value judgement. This approach is a pragmatic response to a qualitative literature base that would suffer from attempts at placing artificial constraints in an effort to attain objectivity (Greenhalgh et al, 2004a).

Box 2 - Inclusion criteria for the literature search

Relevance

- Is (are) the model(s) relevant to the diffusion of non-technological and non-medical innovation in healthcare organisations?
- Is the model linked to implementing innovation or the diffusion of innovations?

Depth

- Has the use of the model been reviewed; and/or
- Has the model been developed through a systematic review of other models?

Utility

- Is there enough detail on the model for me to choose a conceptual model to meet the aims and objectives of my PhD?

The most important criterion for choosing my model was that the model had to be linked to the diffusion of innovations.

I defined them as being linked to the diffusion of innovations if:

- Their development concept papers explicitly linked or mentioned their applicability to disseminating, implementing, or diffusing innovations; and/or
- Other papers discussing the model describe them as being applicable to the dissemination, implementation or diffusion of innovations

Whilst the aim of my inclusion criteria was to provide sufficient flexibility to capture relevant papers, the aim of my exclusion criteria was to ensure a manageable literature review, appropriate to the scale of my project. My exclusion criteria are outlined in Box 3 below. I excluded models that were only applicable to health technology as I wanted a model that had been developed to be applicable to other settings as well. I also adopted the exclusion criteria used in Tabak et al's (2012) narrative review of dissemination and implementation models. Firstly, the models had to be designed to be used by researchers, rather than solely for practitioners and clinicians. Secondly, the models had to be applicable to the system level (such as health system or government), community level (such as local government), organisational level (such as hospital) or individual level, rather than to the national level. Thirdly, the models could not be applicable only to individual-level behavioural change. Fourthly, models were excluded if they were concerned only with dissemination at the end of a research study. The applicability of a model to more than one setting was important because I intend to use models and frameworks in future research projects, and am therefore interested in using models that are applicable for more than one context.

Box 3 - Exclusion criteria for the literature search

- Non-English-language papers
- Papers outside of OECD countries
- Papers not mainly within the healthcare context
- Grey literature
- Papers outside the dates of January 2003 – December 2014 (in February 2015 I used the same search and review process to update my initial search from the initial period for 31 December 2011 to 31 December 2014)
- Models only applicable to health technology
- Models designed solely for practitioners and clinicians
- Models only applicable to the national level
- Models only applicable to individual-level behavioural change
- Models only concerned with dissemination at the end of a research study

3.4.3 Alternative approaches to searching models

I aimed to make my literature search systematic to reduce the instances of missing potentially useful models, and to reduce the criticism of 'bias' in searching. However, my fears stemmed from search approaches in evidence-based medicine, that generally deal with primary studies like randomised control trials. The use of snowball sampling employed by both Damschroder et al (2009) and Tabak et al (2012) demonstrates the need for a pragmatic approach to literature searching when dealing with conceptual models that span different research bases. The criticism of bias in using snowball searching is often the same criticism aimed at other methods in qualitative research. However, as with other methods in qualitative research, it is important to understand the objective of the method and the approach to quality (see Chapter 4 for a more detailed discussion). Snowball sampling can be employed when the aim is to identify theoretical works or concepts across amorphous research boundaries or where the vagueness of the literature requires flexibility. Additionally, thematic saturation is often desired in snowball searches. Damschroder et al's (2009) review that found 19 models and Tabak et al's (2012) review that found 61 models have an important conclusion in common: conceptual models in dissemination, implementation, and diffusion often share the same

constructs, and both reviews reached saturation of these constructs (Damschroder et al, 2009; Tabak et al, 2012).

In addition to snowball sampling, both sets of authors used their research network for recommendations and suggestions for appropriate models or places to look. This method is often employed in conjunction with snowball sampling, since snowball sampling can start by recommendations from networks. Greenhalgh et al (2004a) also note that a number of relevant papers were found through informal social networks (peers sending the reviewers material). Indeed, it was through my informal 'browsing' stage, hand searching of journals, and recommendations from my PhD supervisors that I found my shortlisted models and several papers that would be instrumental in my thesis (for example House et al, 1995).

Damschroder et al (2009) and Tabak et al (2012) also used value judgment on deciding which models to include in their review. This was again a pragmatic approach to finding and including models in this research area. As stated earlier in this chapter, I exercised pragmatism and value judgment in including models in my review because models more widely associated with dissemination and implementation can also be used to explore the diffusion of an innovation. However, the success of Damschroder et al (2009) and Tabak et al (2012) suggests that snowball sampling is an effective approach and additional systematic searching of electronic databases may not yield beneficial results in this research area.

3.5 Results

3.5.1 Hand search of journals

The results of my hand search of journals are outlined in Table 5 below. Initially I chose which journals to include based on those hand searched in the Greenhalgh et al review (2004a) as that review mapped the diffusion of innovation literature base. In order to maximise return-for effort, however, I subsequently decided to hand search only journals which had yielded more than four final

contributing papers to the Greenhalgh et al review (2004a). Greenhalgh et al (2004a) had themselves

found that, whilst there was a high number of potentially relevant journals, the number of relevant

papers emerging from such a hand search was in fact low (they note, for example, that over 8000

articles from the Annals of Internal Medicine were searched, with only one article proving relevant).

In addition to the journals chosen from the Greenhalgh et al review, I chose other journals I considered

to be relevant for my literature search. For example, since the publication of the Greenhalgh et al

review, the journal Implementation Science had been launched, which I expected to yield relevant

papers. The journals I considered relevant were chosen through the non-systematic phase of my

search process, as well as through previous knowledge and experience of papers published through

those journals.

Table 5 - Results from my hand search of journals

Journals included in Greenhalgh et al review	Years searched (this project)	Contributed to final report (this project)
British Medical Journal	2003-2014	0
Journal of the American Medical Association	2003-2014	0
Quality [& Safety] in Healthcare	2003-2014	0
Social Science and Medicine	2003-2014	0
Academy of Management Review	2003-2014	0
Administrative Science Quarterly	2003-2014	0
Health Policy	2003-2014	0
European Journal of Public Health	2003-2014	0
Journal of Public Health	2003-2014	0
Public Health	2003-2014	0
Journal of Health Services Research and Policy	2003-2014	0
BMC Health Services Research	2003-2014	0
Implementation Science	2006-2014	3
Human Resources for Health	2003-2014	0

3.5.2 Search terms

The search strings for my systematic search of electronic databases are outlined in Box 4 below. Greenhalgh et al noted that when searching electronic databases 'the literature was so widely dispersed and inconsistently indexed, we found that the signal to noise ratio was high and the electronic search proved laborious, time-consuming and often disheartening' (2004a, p.388).

Box 4 - Search strings used for the systematic search of electronic databases

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CinAHL Plus with full text
(Note, MH means 'exact subject heading' and MM means 'exact major subject heading' and are used to categorise papers under a specific term)

S1 – MH Models, Theoretical+ AND MM Diffusion of Innovation = 228

PubMed
(Note: MeSH terms – which stand for Medical Subject Headings – are used to categorise papers under a specific term)

S1 – MeSH Diffusion of Innovation, Title/abstract 'Model*' = 828

S2 – MeSH Diffusion of Innovation, Title/abstract 'Framework*' = 406

S3 – S1 OR S2 = 1096

S4 – Title/abstract 'Review' = 1,024,743

S5 – S3 AND S4 = 108

BNI
Innovation* AND (framework* OR model*) = 346

I searched PubMed because it is the main database for peer-reviewed literature in health-related fields, and searched CinAHL and the British Nursing Index (BNI) because of their focus on nursing literature, which I was aware contained original concept papers for implementation frameworks such as PARIHS and the BARRIERS scale (Helfrich et al, 2010). To maintain the search within the scope of my literature review, I excluded the British Education Index and the Education Resources Information Centre (ERIC), due to their focus on education. Similarly, Psychinfo and Psyclit were excluded because cognitive science fell outside the scope of this review. Whilst there may have been a number of studies in both the education and cognitive science databases, I considered that my focus should be grounded in the context of healthcare organisations. The results for my search of electronic databases are shown in Table 6 below.

Table 6 - Electronic databases searched for this project

	Number of papers identified			
	CinAHL Plus with full text	Pubmed	BNI	Total
Search terms	228	108	346	682
Limit to 2003-14	196	99	313	608
Limit to peer review	n/a (196)	n/a (99)	260	555
Final pull for this literature review	1	3	0	4

It is important to note that, in addition to the limits and exclusions I placed on the searches and databases, the most effective tool for managing the very high number of papers was through the inclusion and exclusion criteria detailed in section 3.4.2.

3.5.3 Reference and citation tracking

The tracking of references and citations was noted by Greenhalgh et al (2004a) to be one of their most successful methods of obtaining relevant papers – more than half of the papers that went into their review were obtained by this method. The inclusion and exclusion criteria I outlined in section 3.4.2 applied to these citations and references, and I tracked references and citations only of papers that were included after my hand search of journals and search of electronic databases. If I found relevant papers through reference or citation tracking, I conducted reference and citation tracking on those papers, until no further relevant papers were found. The results are outlined in Table 7 below:

Table 7 - Yields from reference and citation tracking

Paper	Number of citations (2014 and before)	Number of relevant citations (2003-2014)	Number of references (total)	Number of relevant references (2003-2014)
Greenhalgh et al, 2004	568	2	n/a	n/a
McEvoy et al, 2014	4	0	59	2
Helfrich et al, 2010	24	1	63	1
Damschroder et al, 2009	290	1	86	1

3.5.4 Shortlisting of models

The models I shortlisted were the Normalisation Process Theory (NPT) (May, 2013a; 2013b), the Promoting Action on Research Implementation in Health Services (PARIHS) framework (Rycroft-Malone et al, 2004; Kitson et al, 2008), the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al, 2009), and the Greenhalgh et al model (2004a). Box 5 highlights some of the models I found through my browsing stage, and the reasons they did not make my final shortlist.

Models can quite easily be categorised into more than one research domain because fields like diffusion of innovations, knowledge transfer, health promotion, and health improvement as all these domains can intersect. Value judgment was therefore an important part in deciding which models to include in my shortlist. Whilst some models (such as the Ottawa Model, or PRISM) were more directly linked to implementing innovation or the diffusion of innovations, my exclusion criteria meant that they did not make my final shortlist.

In shortlisting the models, I judged that NPT, PARIHS, CFIR and Greenhalgh et al's model can be classified as being applicable to implementing innovation or the diffusion of innovations. For example,

innovation is discussed throughout the development paper of CFIR, and there are innovation models

(included in Box 5) in their review of 19 models (Damschroder et al, 2009). With regards to NPT, Gask

et al (2010) argue that the model is complementary to diffusion of innovations theory because it is

concerned with the spread and routinisation of an intervention or innovation across a network.

Additionally, in a paper in 2006, Carl May describes innovations as complex interventions and goes on

to describe how the normalisation process model (a precursor to NPT) can help understand the

normalisation of innovations or 'complex interventions' (May, 2006).

Box 5 – Selected models that were not shortlisted

Fixsen et al's conceptual framework for implementation (2005)

Fixsen et al provided a comprehensive review of the dissemination and implementation literature. However, the thoroughness of their review did not translate to a detailed conceptual model. I felt that for the purpose of my research their model was too basic in terms of number of constructs

Feldstein and Glasgow's PRISM model (practical, robust implementation and sustainability model) (2008)

This model was interesting because it built on diffusion of innovations theory. However, rather than having the capability to be used for discrete innovation 'products' in a wide range of contexts, the model itself was heavily focused on translating research into practice, and patients were a major component. In that sense, the model was similar to early versions of PARIHS, but I chose PARIHS because it was complemented by a greater body of research. Additionally, later iterations of PARIHS were more strongly linked to implementing innovations and aimed for a diversification in the use of the model.

Kilbourne et al's (2008) Replicating Effective Programs (REP) Framework.

The constructs in this model were spread evenly between pre-conditions, pre-implementation, implementation, and maintenance, and in that sense the model was well balanced. However, it has not been used as widely as NPT and PARIHS, and whilst it has some interesting constructs (such as 'packaging'), it was designed to be used practically by researchers to get their research evidence into practice. This meant it was not as appropriate as my shortlisted models to use as an analytical framework because the REP framework's constructs focus on things relevant to the researcher's control, rather than other factors outside their control.

The Ottawa Model of Research Use by Graham and Logan (2004)

Whilst this model also stated that it was based on diffusion of innovations research, its constructs were poorly defined, and the development paper was not detailed enough to be used as a reference when analysing and querying data. Additionally, it has not been used as widely as NPT and PARIHS.

Whilst PARIHS was originally intended for research-into-practice use, in a development paper for PARIHS, Kitson et al (2008) link evidence to innovation. Additionally, the paper also argues that PARIHS can be used across disciplinary boundaries, and liken such a trait to the Greenhalgh et al model.

As with PARIHS, the CFIR has been shown to be applicable in a range of settings (Damschroder and Lowery, 2013; Kirk et al, 2016), and therefore met another important characteristic I looked for when shortlisting models. Similarly, whilst NPT in its earlier iteration as the Normalisation Process Model was designed for telemedicine, its expansion to the NPT (which added the constructs of Coherence, Cognitive Participation, and Reflexive Monitoring) meant that it was intended to be used in wider settings, culminating in a later paper that aimed to expand on NPT towards a general theory of implementation (May, 2013a).

By focusing too closely on 'innovation', I may have excluded potentially relevant models not associated with implementing innovation but nonetheless applicable to my research context. Nevertheless, to conduct in-depth analysis within my given resources this limitation was necessary and I defined the search scope to models that had more overt applicability to implementing or diffusing innovation.

The shortlisted models and their characteristics are briefly described below, followed by a discussion of their operationalisation, applicability, and my choice of model.

3.5.5 Description of shortlisted models

Normalisation process theory
Normalisation process theory (NPT) is a sociological theory of implementation that focuses on the individual and group processes required to 'normalise' new technologies and practices, particularly focusing on embeddedness (when practice is in the routine everyday work of individuals or groups) and integration (when practices are reproduced and sustained by individuals or groups) (Finch et al, 2012). NPT can be used in three ways: to help predict whether an intervention may be routinised in

an organisation; to measure the level of routinisation of an intervention in an organisation; or to explain a current context of routinisation in a case study (May, 2013a; 2013b). NPT may thereby inform the development and evaluation of complex interventions and help in the understanding of implementation of innovations (May et al, 2011). It focuses on the deliberate investments and attempts of individuals or groups to contribute to the process of implementing, integrating and sustaining an innovation (May et al, 2011).

NPT has four main constructs (May et al, 2011; Finch et al, 2012):

- Coherence: investments of meaning – processes of individual and communal sense-making that facilitate or hinder the understanding of a complex intervention.

- Cognitive participation: investments of commitment – the processes of participation that facilitate or hinder the acceptance and adoption of a complex intervention.

- Collective action: investments of effort – processes of collective action that facilitate or hinder the utilisation of a complex intervention.

- Reflexive monitoring: investments in monitoring and appraisal – the processes of individual and communal monitoring and assessment that promote or hinder understanding of the effects of the complex intervention.

The above four constructs are influenced by group norms and conventions (May et al, 2011). Whilst NPT emerged from a conceptual model that was originally intended to be used in the field of e-health and telehealth (May et al, 2003), it has since been used in a variety of settings such as chronic health care, maternity care and language interpretation services (McEvoy et al, 2014).

McEvoy et al (2014) conducted a systematic review of studies that used NPT (and its predecessor, normalisation process model). The authors sought to understand what innovations and interventions NPT was being used to analyse, how NPT was being operationalised, and whether there were any reported benefits. In addition, they explored the stability of the NPT constructs across studies

(McEvoy et al, 2014). McEvoy et al (2014) determined the benefits of using NPT by focusing on the reflections of authors in the studies reviewed. A total of 20 out of the 29 papers reviewed by McEvoy et al (2014) provided data on the use of NPT, and 15 of these 20 papers stated that NPT was beneficial because it provided an explanatory framework that helped identify the factors that facilitated or inhibited the implementation of complex interventions. Additionally, there was strong endorsement from the papers of using NPT as a framework to analyse implementation processes and develop recommendations.

NPT has been operationalised in clear ways (McEvoy et al, 2014). Of the 29 studies McEvoy et al (2014) reviewed, 11 studies used all four of NPT's constructs. A total of 17 studies focused exclusively on the construct 'Collective Action', while one study focused on the construct 'Coherence'. McEvoy et al (2014) stated that clear themes emerged with regard to the emphasis placed on the NPT constructs by the studies. For Coherence, the emphasis from the studies was on the conceptualisation of interventions. For Cognitive Participation, the emphasis was on legitimation and buy-in from individuals. For Collective Action, the emphasis was on organisational resources, training, divisions of labour and the interactions of the intervention in clinical settings. For Reflexive Monitoring, the emphasis was on appraising and monitoring implementation.

One of the strengths of NPT is that it can also be operationalised via a web tool (May et al, 2011). The web tool is a survey that appears fairly clear and easy to use, and aims to assist policy makers in planning the design and implementation of complex interventions (May et al, 2011). The toolkit includes instructions on how to use the web tool and the theory from which it was developed. The toolkit asks 16 closed-ended questions which are answered via an interactive sliding scale. Once the questions have been answered, an automatic report is generated to allow policy makers to understand or plan their implementation and normalisation process (May et al, 2011). The simplicity of the NPT web tool means that, while it may meet the needs of policy makers to inform their implementation

decisions and policies, it cannot be used by itself to gather sufficiently rich and complex data for in-depth implementation research (May et al, 2011, p.7).

McEvoy et al (2014) stated that, in general, the use of the NPT constructs across contexts by the studies they reviewed resonated with their own understanding of the constructs. Where differences of understanding occurred, McEvoy et al (2014) noted that this related to the overlapping nature of the NPT constructs themselves. McEvoy et al (2014) found that the NPT constructs could be applied to a range of settings, but noted that the overlaps between constructs presented challenges in applying NPT. However, because McEvoy et al's analysis of construct stability was based on whether they believed the coded data from the studies had resonance with their own understanding of the NPT constructs, bias may have been introduced into their analysis. Whilst McEvoy et al (2014) stressed that this did not mean judging whether studies correctly or incorrectly used the NPT constructs, but rather whether studies made a clear case for using the constructs in the manner they did, McEvoy et al's (2014) analysis was highly subjective and it was unclear how this was mitigated. Another potential limitation in McEvoy et al's (2014) review is that some of the authors were actually involved in the development of NPT. However, the lead author led all steps in the review and was not involved in the development of NPT and discussions were had with all the authors during the mapping and interpretation phase.

Further development of NPT has been suggested, such as determining its value in guiding the development of innovations, the need for study-specific measures of NPT, and its potential to be used to assess the likelihood of future normalisation of complex interventions (McEvoy et al, 2014). It has nevertheless been demonstrated to be a robust and useful model with the potential to analyse complex interventions across a range of contexts.

PARIHS

The Promoting Action on Research Implementation in Health Services (PARIHS) framework was first published in 1998 as an unnamed framework that was inductively developed based on expert experience of practice improvement and guideline implementation (Kitson et al, 1998). In 2002, the PARIHS acronym was first used in a paper that refined the 1998 framework based on conceptual analyses of implementation literature (Rycroft-Malone et al, 2002). Two further iterations of the PARIHS framework occurred over subsequent years based on evidence reviews and conceptual analyses (Rycroft-Malone et al, 2004; Kitson et al, 2008).

The original aim of the PARIHS framework was to represent the main determinants for successfully implementing research into clinical practice (Helfrich et al, 2009). The intention of the developers of the framework is for PARIHS to be used in two stages: in helping to diagnose and guide the assessment of evidence and context for the implementation of evidence-based practice; and in guiding the development, selection and evaluation of facilitation strategies (Helfrich et al, 2010).

The PARIHS framework (Figure 3 below) is divided into three core elements:

1. Evidence, defined as any codified or non-codified sources of knowledge

2. Context, defined as the quality of the setting where the research is implemented

3. Facilitation, defined as a technique exercised by a person to make things easier for others, and to help people change their attitudes, habits, skills and ways of thinking and working (Helfrich et al, 2010).

The main claim of PARIHS is that successful implementation is a function of evidence, context and facilitation and their interactions. Each of the three main elements can be assessed as to whether it has a 'weak' or 'strong' effect on implementation (Helfrich et al, 2010).

The 'evidence' element itself contains four components which represent different types of research evidence: evidence from published sources or through the participation in formal experiments;

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evidence from professional or clinical experience; evidence from patient (as well as family and caregiver) experience or preference; and evidence from the collective local practice context (Helfrich et al, 2009). A fundamental aspect of PARIHS is that, whilst the 'evidence' construct is often treated as the highest weighted element, the types of evidence outlined by the four sub-constructs are not weighted since they are all treated as evidence from the perspective of the end user (Helfrich et al, 2010).

The 'context' element contains three components: organisational culture (the shared values, beliefs and attitudes in the organisation or sub-units); leadership (including team working, control, decision making and empowerment); and evaluation (how an organisation measures its performance and feeds back to its employees) (Helfrich et al, 2009).

The 'facilitation' element in PARIHS does not contain further components. PARIHS is clear in separating facilitation from other multi-faceted interventions, and describes it as a change technique which enables people (rather than doing for others) and is responsive and interactive (Helfrich et al, 2009).

Helfrich et al (2010) conducted a critical review and synthesis of papers concerning the PARIHS framework. Their aim was to understand how PARIHS has been used, how its constructs and sub-constructs have been operationalised, and the strengths and limitations of the framework. A total of 24 papers were synthesised: six core concept papers from the original developers of PARIHS, and 18 empirical papers, ranging from case reports to quantitative surveys. Their synthesis showed that PARIHS was mainly used as a framework for analysis or the reporting of findings.

Helfrich et al (2010) identified three main limitations in the literature on PARIHS. Firstly, the six core concept papers were developed without a systematic review of the literature. Secondly, none of the papers on PARIHS used the framework to prospectively design implementation strategies. This limitation did not influence my decision on which model to choose since I was not undertaking

prospective design of implementation strategies. Thirdly, Helfrich et al (2010) noted that most of the papers on PARIHS were of low quality, with 'significant lack of detail about how variables were measured, mapped to PARIHS elements, or how results or conclusions were derived' (Helfrich et al, 2010, p.6). Papers rarely compared their findings with those of previous studies, and PARIHS was mainly referred to in the introductions to papers rather than as a conceptual framework (Helfrich et al, 2010).

Figure 3 - PARIHS framework (Helfrich et al, 2010)

Elements	(Sub-elements)	Criteria	
Evidence	Research	Well conceived, designed and executed research	
		Seen as one part of a decision	
		Valued as evidence	
		Lack of certainty acknowledged	
		Social construction acknowledged	
		Judged as relevant	
		Importance weighted	
		Conclusions drawn	
	Clinical experience	Clinical experience and expertise reflected upon, tested by individuals and groups	
		Consensus within similar groups	
		Valued as evidence	
		Seen as one part of a decision	
		Judged as relevant	
		Importance weighted	
		Conclusions drawn	
	Patient experience	Valued as evidence	
		Multiple biographies used	
		Partnerships with health care professionals	
		Seen as one part of a decision	
		Judged as relevant	
		Importance weighted	
		Conclusions drawn	
	Information from the local context	Valued as evidence	
		Collected and analyzed systematically and rigorously	
		Evaluated and reflected upon	
		Conclusions drawn	
Context	Receptive context	Physical	
		Social	
		Cultural	boundaries clearly
		Structural	defined and acknowledged
		System	
		Professional/social networks	
		Appropriate & transparent decision making processes	
		Power and authority processes	
		Resources – human, financial, equipment – allocated and Information and feedback	
		Initiative fits with strategic goals and is a key practice/patient issue	
		Receptiveness to change	
	Culture	Able to define culture(s) in terms of prevailing values/beliefs	
		Values individual staff and clients	
		Promotes leaning organization	
		Consistency of individuals role/experience to value:	
		- relationship with others	
		- teamwork	
		- power and authority	
		- rewards/recognition	
	Leadership	Transformational leadership	
		Role clarity	
		Effective teamwork	
		Effective organizational structures	
		Democratic inclusive decision making processes	
		Enabling/empowering approach to teaching/learning/managing	
	Evaluation	Feedback on:	
		- individual	
		- team — Performance	
		- system	
		Use of multiple sources of information on performance	
		Use of multiple methods:	
		- Clinical	
		- Performance — Evaluations	
		- Economic	
		- Experience	

Facilitation	Purpose	Task	Holistic
	Role	Doing for others	Enabling others
		- Episodic contact	- Sustained partnership
		- Practical/technical help	- Developmental
		- Didactic, traditional approach to teaching	- Adult learning approach to teaching
		- External agents	- Internal/external agents
		- Low-intensity – extensive coverage	- High-intensity – limited coverage
	Skills & attributes	Task/doing for others	Holistic/enabling
		- Project management skills	- Co-counselling
		- Technical skills	- Critical reflection
		- Marketing skills	- Giving meaning
		- Subject/technical/clinical credibility	- Flexibility of role
			- Realness/authenticity

The main issue with the PARIHS framework identified by Helfrich et al (2010) was the need for greater conceptual clarity in the definitions of the sub-constructs and their dynamic relationships. The authors found that, in a number of papers, there was significant conceptual overlap between sub-constructs. For example, the need for clearly defined cultural boundaries is found in the definitions of the 'leadership' and 'receptive context' sub-constructs. Nevertheless, the authors also stated that PARIHS

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was a flexible framework with a broad definition of what can be classed as 'evidence' and a track record of being operationalised (Helfrich et al, 2010).

Similarly to NPT's web tool, PARIHS has been operationalised by a survey tool called ORCA (Organisational Readiness to Change Assessment) (Helfrich et al, 2009). ORCA measures the 'receptive context' construct in PARIHS, and focuses on organisational readiness to implement a specific change or innovation in a clinical setting. Whilst ORCA focuses on receptive context and organisational readiness for change, it also contains a number of items that measure other constructs (Hagedorn and Heideman, 2010). For example, ORCA measures 'champions', which are found in the 'communication and influence' construct in the Greenhalgh et al model, and looks at 'resources' which is found in the 'system antecedents' construct in the Greenhalgh et al model. However, even in cases where assessment items measure other constructs, they are measured in the context of a specific change initiative, rather than wider innovation or change in general. On the whole, the ORCA items do not assess all the components that research shows influences the diffusion of innovation (Greenhalgh et al, 2004a).

Consolidated Framework for Implementation Research

The Consolidated Framework for Implementation Research (CFIR) model is a 'meta-theoretical' model that aims to provide an overarching typology of implementation by amalgamating constructs from a range of models in implementation science (such as diffusion of innovations, organisational change, and knowledge transfer) (Fredriksson et al, 2014). The CFIR consists of five domains and 39 constructs (see Table 8 below) and aims to provide constructs with explicit and operational definitions. As with Greenhalgh et al's model, the CFIR constructs were developed from a range of disciplines (such as psychology, sociology and organisational change) (Damschroder and Lowery, 2013).

In their comparison of implementation theories and models, Damschroder et al (2009) argued that there is considerable overlap between theories and models, though they also argued that each is missing constructs included in other theories. They intended the CFIR to provide a flexible approach,

being a list of constructs aimed at facilitating theory development and verification of what implementation intervention works where and why in various contexts, rather than attempting to provide explanations of inter-relationships between constructs. Researchers are encouraged to select constructs from the CFIR that are relevant for their particular study, with the aim of either guiding diagnostic assessment of implementation context, or evaluating and explaining implementation findings. Table 8 below outlines the constructs of the CFIR.

Damschroder et al (2009) developed the CFIR after having reviewed 19 implementation models. The implementation models were identified using a snowball sampling approach. Damschroder et al (2009) limited their review to theories based on a synthesis of literature or as part of a large study. This demonstrates, as with my literature review, that a pragmatic approach to inclusion criteria is needed, due to the plethora of implementation models and amorphousness of the boundaries of the implementation science literature base. However, though expert recommendations and the Greenhalgh et al and PARIHS models were used for the snowball sampling method employed by the authors, there were few details with regard to their literature review. For example, little detail was provided about the inclusion criteria.

Table 8 - Domains and constructs of the CFIR model

	Domains				
	Intervention characteristics	**Outer setting**	**Inner setting**	**Characteristics of individuals**	**Process**
Constructs	Intervention source	Patient needs and resources	Structural characteristics	Knowledge & beliefs about the intervention	Planning
	Evidence strength & quality	Cosmopolitanism	Networks and communications	Self-efficacy	Engaging
	Relative advantage	Peer pressure	Culture	Individual stage of change	Executing
	Adaptability	External policies and incentives	Implementation climate	Individual identification with organisation	Reflecting and evaluating
	Trialability		Readiness for implementation	Other personal attributes	Opinion leaders
	Complexity		Tension for change		Formally appointed internal implementation leaders
	Design quality and packaging		Compatibility		Champions
	Cost		Relative priority		External change agents
			Organisational incentives & rewards		
			Goals & feedback		
			Learning climate		
			Leadership engagement		
			Available resources		
			Access to knowledge & information		

Damschroder et al (2009) selected the constructs for CFIR based on the strength of conceptual or evidential support in the literature, consistency of definitions, and 'alignment with our own [Damschroder et al's] experience' (p.3). They stated that their process of developing CFIR involved standardising terminology from different theories and models, combining constructs across theories, and separating other constructs to develop definitions. However, the authors do not describe how they combined constructs, why some constructs were combined and not others, who combined them and how much agreement there was between authors in the combination and separation of constructs. Damschroder et al (2009) argue that the constructs of the models which they reviewed overlap, yet that each model has important omissions and limitations. However, despite providing a matrix in an additional file which provides an outline of where they believe the models overlap and have omissions, they do not provide in-depth arguments for the omissions of these models.

The CFIR has also been used in other studies that have attempted to increase our knowledge and understanding of the use of the model (Connell et al, 2014; Fredriksson et al, 2014; English et al, 2011). For example, a study by Fredriksson et al (2014) used the CFIR as a coding framework to thematically analyse interviews by politicians and administrators concerning a quality improvement intervention. The authors argued that CFIR may not be able to capture process-level data for the implementation of broad policies. They suggested that, whilst this may be because the national policy agreement they studied lacked an implementation strategy, it may also be that the process construct in the CFIR model is more suited to easily defined interventions where implementation can be planned, executed, and evaluated. In order to improve the operationalisation of the CFIR, an online resource was developed and made available on open access (Damschroder and Lowery, 2013; Consolidated Framework for Implementation Research, 2015). The online resource details all the CFIR constructs, including an explicit definition of each construct, the rationale the developers used for including a particular construct in the framework, qualitative coding guidelines for using the constructs, and links to quantitative measures where available. The website (http://www.cfirguide.org) also includes

suggestions for interview topic guides, and other tools to aid the operationalisation of its framework, such as a pre-populated template for data analysis and templates to organise meeting notes along CFIR constructs (Consolidated Framework for Implementation Research, 2015). Out of the four models I have explored in this chapter, CFIR has the most resources to facilitate its operationalisation. However, it must be noted that, at the time when I was conducting my interviews and choosing which conceptual model to use, these CFIR resources were unavailable.

Greenhalgh et al, 2004
The Greenhalgh et al (2004a) review is considered the first meta-narrative review (Wong et al, 2013). The review method was developed to overcome the challenges of synthesising papers in a wide range of research traditions in order to identify the scope of diffusion of innovation as a separate research tradition (Greenhalgh et al, 2004a; Wong et al, 2013; Gough, 2013). Meta-narrative reviews aim to synthesise research from areas which are conceptualised and studied in different research traditions. They explore how research traditions have changed over time with regard to a particular topic, and examine the different approaches when studying an issue (Wong et al, 2013; Gough, 2013).

Greenhalgh et al (2004a) charted the emergence of the modern diffusion of innovation research base, which began as small sub-sets of larger research traditions to eventually culminate in a separate tradition in its own right. They did this by mapping 11 research traditions,[3] describing their overall historical and theoretical contexts with regard to the diffusion, dissemination and implementation of innovations.

At the start of their review, Greenhalgh et al (2004a) were 'working with much fuzzier and contested definitions of key terms' (p.55) than those set out in their final paper. The ambiguity they met 'made it almost impossible to focus the study or set tight inclusion criteria for primary sources' (Greenhalgh

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[3] These traditions were: rural sociology, medical sociology, communication studies, marketing and economics, development studies, health promotion (including social marketing), evidence-based medicine and guideline implementation, 'classical' organisation studies, knowledge-based organisational studies, narrative organisational studies, and complexity theory as applied to organisational change (Greenhalgh et al, 2004a, p.53).

et al, 2004a, p.55). Partly as a result of this, their review sought to add to the discourse of systematic reviews for complex evidence, arguing that a traditional 'Cochrane[4]'-style systematic review would be inappropriate for a literature base that tends to be qualitative in nature, with heterogeneous methodologies and exploratory research questions.

The Greenhalgh et al model and review builds on earlier work by Rogers (1995, 2003) on the diffusion of innovations, but adds more recent evidence and, importantly, focuses on diffusion of innovations in health service organisations. I therefore did not include Rogers' diffusion of innovation framework, despite it being a prominent model.

From their review of diffusion of innovation evidence, Greenhalgh et al developed a conceptual model for the diffusion of innovations in healthcare organisations (Figure 4 and Box 6).

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[4] Cochrane (2015) (http://www.cochrane.org) is an independent global organisation that produces systematic reviews of research evidence on a range of health topics

Figure 4 - Greenhalgh et al's (2004a) diffusion of innovations model

THE INNOVATION

Inherent attributes
 Relative advantage
 Compatibility
 Low complexity
 Trialability
 Observability
 Reinvention

Operational attributes
 Task relevance
 Task usefulness
 Feasibility
 Implementation
  complexity
 Divisibility
 Nature of knowledge

COMMUNICATION AND INFLUENCE

DIFFUSION
(Informal, unplanned)

 Social networks
 Homophily
 Peer opinion

 Marketing
 Expert opinion
 Champions
 Boundary spanners
 Change agents

DISSEMINATION
(formal, planned)

LINKAGE: DESIGN STAGE

Relationships and communication
 Credibility of change agent
 Shared meanings and mission
 Knowledge transfer
Innovation development
 User involvement in specification
 Capture of user-led innovation

THE INNER CONTEXT: SYSTEM ANTECEDENTS

Structure
 Size/maturity
 Formalisation
 Differentiation
 Decentralisation
 Slack resources

Absorptive capacity for new knowledge
 Pre-existing knowledge/skills base
 Ability to find, interpret, re-codify
  and integrate new knowledge
 Enablement of knowledge sharing
  via internal and external networks

Receptive context for change
 Leadership and vision
 Good managerial relations
 Risk-taking climate
 Clear goals and priorities
 High quality data capture

Inner context (user system)

Resource system

LINKAGE

The innovation

Knowledge purveyors

Diffusion

Dissemination

Change agency

LINKAGE

Outer context

System antecedents

System readiness

Adoption by individuals

Implementation within the system

Consequences

THE INNER CONTEXT: SYSTEM READINESS

Tension for change
Fit with system and its goals
Balance between
 supporters and opponents
Assessment of implications
 ('soft periphery' elements
 including staff changes)
Dedicated time / resources
Monitoring and feedback

ADOPTION

The adopter
 Motivation
 Values and goals
 Social networks
 Skills
 Learning style
The adoption decision
 Optional
 Collective,
 Majority
 Contingent
The adoption process
 Knowledge
 Persuasion
 Decision
 Implementation
 Confirmation

THE OUTER CONTEXT

Sociopolitical climate
Incentives and mandates
Inter-organisational norms/values
Inter-organisational collaboration
Environmental stability

LINKAGE: IMPLEMENTATION STAGE

Communication and information
User orientation
Product augmentation e.g. technical help
Project management support

INNOVATION CONSEQUENCES

Recognised and intended
Unanticipated, desirable
Unanticipated, undesirable
Knock-on for other systems

IMPLEMENTATION/ SUSTAINABILITY

Human resources   Staff engagement
Decision making autonomy
Internal and external collaboration
Reinvention/development

Source: Greenhalgh et al, 2004a

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Box 6 - Description of Greenhalgh et al's (2004a) main constructs

The innovation – this construct represents the characteristics of the innovation.

Linkage (design stage) – this construct represents the relationships and links between the developer of the innovation and potential adopters at the stage when the innovation is designed.

The inner context (system antecedents) – this construct represents organisation-level components, and the term 'system antecedents' signifies the organisational determinants of innovativeness which are independent of the innovation itself.

The inner context (system readiness) – 'system readiness' signifies the receptiveness of an organisation towards a particular innovation (rather than 'system antecedents', which are more general).

Adoption – this construct represents the processes of adoption of the innovation, as well as the characteristics of the adopter.

Implementation/sustainability – this construct represents the stages of diffusion after adoption has occurred, in which the sustainability of implementation becomes of concern.

Innovation consequences – this construct represents the consequences of the implementation of the innovation within an organisation.

Linkage (implementation stage) – this construct represents the support the developer of the innovation provides to the adopter of the innovation

The outer context – this construct represents the variables which are outside an organisation but which influence the implementation of the innovation

Communication and influence – this construct represents the communication of the innovation, such as the methods and type of dissemination

Whilst the Greenhalgh et al model contains in-depth descriptions of its constructs and sub-constructs, it does not offer explicit and operational definitions for the large majority of them. Neither does it offer ways in which these constructs and sub-constructs could be operationalised (Cook et al, 2012). Nevertheless, the Greenhalgh et al model was used in the Greenhalgh et al review (2004a) to explore four case studies. In the review, Greenhalgh et al concluded that their model provided a useful framework for explaining the diffusion of innovations in four case studies (integrated care pathways, GP fundholding, telemedicine, and electronic health records) in the UK (Greenhalgh et al, 2004a). Whilst there may be risk of partiality in their assessment, Greenhalgh et al did choose the case studies to represent a range of contexts and variables, including: strength of evidence for the innovation,

setting (primary or secondary care), sector (private or public), and main unit of implementation (individual, team or organisation). They argued that the model prompted useful questions and reflections about the spread of innovations in different contexts. The Greenhalgh et al model has also been used elsewhere. For example, Khanassov, Vedel and Pluye (2014) used it as an organising framework for their synthesis of literature on case management for dementia in primary care. However, their paper only used the model as a post hoc organising framework and did not offer conclusions on the model's applicability or usefulness, or discuss its relation to diffusion of innovation theory. Ultimately, whilst the Greenhalgh et al review has been widely cited, their conceptual model has not been used as widely as PARIHS or NPT.

The conceptual model depicted above (Figure 4) differs from a later version of the conceptual model published in The Millbank Quarterly in the same year (Greenhalgh et al, 2004b). It is unclear why Greenhalgh et al changed their original model, nor did they explain whether there are any advantages of the newer model over the original version. Additionally, it is unclear why some authors, such as Cook et al, used one version rather than the other or indeed what version they used. This creates an element of confusion in analysing and operationalising the Greenhalgh et al model. Throughout this chapter and my PhD research, I have used Greenhalgh et al's original model (Figure 4). This is because their larger review provided more detailed information on the constructs and allowed me to better link the constructs in their model with the evidence described in their review.

3.6 Discussion

3.6.1. Multi-level approach

One of the objectives of my review is to identify a model that can facilitate a rich exploration of the processes of diffusion of innovation. Such a model must have the capacity to be used in a multi-level approach, as understanding the reasons for the success or failure of dissemination and

implementation requires an understanding of multiple levels in the context being studied (Fredriksson et al, 2014).

Importance of a multi-level approach to diffusion of innovation research
In a paper advocating the use of a 'macro-meso-micro' paradigm for understanding organisational change and relationships, House et al critiqued the application of single-level micro (focusing on individuals or groups) or macro (focusing on organisations) theories for researching organisations (House et al, 1995). They argued that macro organisational theories were limited because they treated individuals and groups within organisations as 'black boxes' who are done unto and have no influence or autonomy. In their view, macro theories ignore the fact that 'organizations are founded, formed, grow, reach stability, adjust to environmental change, and decline' because of human processes (House et al, 1995, p.76). On the other hand, the authors also argued that micro theories that use psychology and behavioural theory place individuals and groups in a context-free environment, despite evidence that organisational factors modify the meaning of events experienced by individuals and groups. The limitations of micro organisational theories in acknowledging contextual variables for human behaviours mean they are inadequate at describing processes in organisations (House et al, 1995).

House et al specified a number of reasons as to why such 'meso' theorising fills the gaps left by using single-level micro or macro theories alone and is therefore important to use when studying organisational behaviour. Firstly, if variables in single-level theories correlate to variables outside that theory, the external variables may be incorrectly described as a function within that theory. For example, micro-level theories may describe an organisational variable as a product of individuals or groups when that might not be the case. Secondly, there are a number of phenomena that are found across either hierarchical echelons or levels of analysis, and therefore sticking to one level may ignore broader trends and differences that would provide more rounded insight. Thirdly, meso theorising allows for more integrated understanding of organisational behaviour. Fourthly, and because of the

above points, meso theorising allows for the coding of data in a way that can reveal patterns and gaps in knowledge (House et al, 1995).

Important in House et al's argument is the notion that the framework used for analysis should follow the realities of organisational workings; an organisation is composed of multiple levels interacting with and influencing one another and 'the units of analysis involved in the study of organisations occur naturally at several levels: individual, dyad, informal groups, subdivisions of organisations such as work units, departments, or divisions, organisations, and clusters of organisations such as industries or populations. To implement an organisational strategy to foster innovation would require concerted effort across several levels of analysis' (House et al, 1995, p.73). It must be noted that House et al are interested in multi-level research in the context of organisational behaviour, focusing in particular on the comparison of organisational relationships and causal mechanisms. However, diffusion of innovations research differs from organisational behaviour research because the focus is not on organisational relationships per se, but rather on the journey of an innovation within an organisation.

It must be recognised that multi-level theories are by nature more complex than single-level theories as they encompass more elements and relationships. Klein et al (1999) argue that this complexity can be a barrier to the development or use of multi-level theories and there is a need to balance clarity with depth and simplicity with richness. The authors state that, at one extreme, some multi-level theories have constructs linked by extraordinarily complex modifying relationships and processes which ultimately restrict the use of these theories in any practical sense, whilst at the other extreme, some multi-level theories transpose constructs to multiple levels simply because that construct is valid for single levels (Klein et al, 1999).

In addition to the difficulty in balancing parsimoniousness with richness, there is little consensus on what actually constitutes a 'level' in multi-level theories (Chaudoir et al, 2013). House et al (1995) defined the meso paradigm as 'the simultaneous study of at least two levels of analysis wherein (a) one or more levels concern individual or group behavioural processes or variables, (b) one or more

levels concern organisational processes or variables, and (c) the processes by which the levels of analysis are related are articulated in the form of bridging, or linking, propositions' (p.73). The authors argued that the concept of 'levels' can be thought of in two ways. One way is to think of them in terms of levels of analysis, meaning that levels are not necessarily hierarchical but, rather, are defined by being an entity such as individuals, groups, organisations or nations. In contrast, 'levels' can also be thought of in terms of organisational levels, and therefore tend to be hierarchical. House et al used the term 'echelons' to describe such hierarchical levels.

Other authors argued that House et al's attempt to describe constructs and levels with specificity and explicitness incorrectly suggested that the macro, meso and micro levels matched the formal groupings of organisations (such as departments, formal individual roles, and committees) (Klein et al, 1999). In attempting to resolve this limitation, theorists such as Drazin et al (1999) argued that levels and constructs should fall less into formal groupings, and more into thematic areas. For example, 'creativity' as a construct could encompass all levels and groups in an organisation in different ways. Other authors such as Dansereau et al (1999) stated that specificity and explicitness of levels wrongly lead to the assumption that levels and constructs within organisations are static. The authors argued instead that constructs and levels can change over time and space. For example, individuals may hold certain values, but these individuals may form groups over time with the values held by the group being different from the values they hold as individuals.

House et al argued that organisations are moving towards fewer hierarchical structures and therefore researchers should move away from echelon-specific research. However, because the NHS and NHS Trusts still operate under hierarchical structures as staff are paid and employed according to a strict 'grade' system, my multi-level approach in part uses the concept of echelons to reflect this continuing hierarchy. The meso level studied will be the Trusts and senior leaders within the Trusts, and the micro level studied will be junior staff (this is discussed in more detail in the Methods chapter). Because the macro level in this project is taken to be NICE, with its national influence and its workings

across Trusts and other organisations, my approach mixes echelon levels as well as 'levels of analysis'. This was done to give a more accurate reflection of my study context. Whilst Drazin et al's (1999) thematic levels are interesting and could offer valuable insight into the diffusion of an innovation by exploring conceptual levels rather than traditional workplace groupings, it was unclear how and what thematic levels I could have used for my case studies. For example, it was unclear how I could have identified 'creatives' or whether 'creatives' had to be objectively creative across all Trusts or whether they could be relatively creative within their Trust. Equally, Dansereau et al (1999) were right in arguing that levels change over time, and this stipulation is a caveat that needs to be acknowledged.

In the approach I have taken in this study, relationships and interactions are explored if and when they influence the innovation spreading within an organisation. By using the thematic constructs in the Greenhalgh et al model, both horizontal and vertical relationships and interactions can be explored, depending on what emerges from relevant data from the interviews.

In addition to using a conceptual model that would allow for multi-level exploration, it was necessary to use methods that would allow such exploration. Klein et al (1999) argued that the application of multi-level theories requires the use of certain methods over others, particularly in data collection. Single-organisation studies (popular with micro research) would not suffice, as more than one organisation may be required to provide high-quality analysis when using a multi-level approach. Conversely, studies that explore single units in multiple organisations may also not suffice, as they would not be able to provide the depth required (I discuss this balance in more detail in my chapter on methods). In consequence, the authors recommend gathering data from multiple individuals and multiple units across multiple organisations, though they also acknowledge that in following this method of data collection, trade-offs may be required between parsimony and depth (Klein et al, 1999). I took this approach for this study (as discussed in the chapter on methods).

The capacity of models to account for macro-meso-micro levels

As a sociological theory, NPT's approach to implementation is to analyse social action: 'practices become routinely embedded in social contexts as the result of people working, individually and collectively, to enact them, and the production and reproduction of a practice requires continuous investment by individuals to carry action forward' (May et al, 2011, p.2). By aiming to explain the interplay between an intervention, the actions of individuals, and the outer environment experienced by the individuals, NPT attempts to address the gaps of behavioural models that focus on the micro level (May et al, 2011). However, its emphasis on social action means it is skewed towards individuals and groups, and therefore places less emphasis on organisational factors (such as system antecedents) that can influence diffusion of innovations. In addition, it is unclear, from both the NPT and the NPT toolkit, how the 'macro' level is accounted for, particularly since the 'outer context' is not an explicit construct in NPT.

Though PARIHS is not a sociological theory like NPT, it too focuses on the roles of individuals and teams within the organisational context. Whilst one of the strengths of PARIHS is that it can be used to assess multiple staff levels in an organisation through the assessment of 'context' (in particular, organisational culture), it is limited to the extent that the organisational culture construct is the main conduit for multi-level analysis (Helfrich et al, 2009). As with NPT, one of the biggest omissions and limitations of the PARIHS framework is that it does not have a ready capacity to explore the 'outer context', making analysis of macro levels difficult.

Though like PARIHS the CFIR is focused on the clinical setting, it has been used to study the macro-meso-micro levels for a non-clinical quality improvement initiative in a Swedish context (Fredriksson et al, 2014). However, Fredriksson et al argue that, as CFIR focuses on the clinical level (provider team or group levels, and hospital or clinical management levels), it does not adequately deal with multiple levels in a non-clinical setting because non-clinical levels (such as policy or economic contexts) are dealt with by the 'outer context' domain. As their macro-meso-micro levels were national/county

council/provider levels respectively, policy and economic contexts were relevant to their 'meso' level, creating confusion between the 'outer' and 'inner' context of the CFIR (Fredriksson et al, 2014).

The Greenhalgh et al model is also based on the premise that a deeper level of understanding of the diffusion of innovations cannot be restricted to a single level of analysis, and was developed in part as a way to address what the Greenhalgh et al (2004a) review argued was a failure in previous models to account for interactions between different levels (for example, the moderating effect of organisational setting on individual decision making) (Robert et al, 2010). The Greenhalgh et al model has been used to study shared electronic health records at the macro-meso-micro level (Greenhalgh et al, 2008). The authors found that using a case study-based approach allowed them to document interactions between the micro level (people's attitudes towards and concerns about the innovation), meso level (organisational antecedents), and macro level (the socio-political forces). However, it should be noted that the lead author for this study was one of the developers of the model, and the context which was studied was a traditional healthcare context that the CFIR may also readily deal with in terms of multi-level analysis. Nevertheless, it is apparent that both the Greenhalgh et al and CFIR models have a greater capacity to explore multiple levels in the diffusion of an innovation than do NPT and PARIHS.

Applicability to my research aims and objectives
The conduciveness to a multi-level approach was an important factor in the choice of conceptual framework. Two other important characteristics for the model I use as my conceptual framework are the capacity to explore potentially complex data and the ability for the model to be used for the context I am researching (the implementation of non-clinical guidelines in healthcare organisations).

McEvoy et al's (2014) argument for the benefits of NPT made a strong case for the use of NPT for my conceptual framework since it is applicable to the contextual settings of my research and the focus on processes: 'It [NPT] has potential utility as a conceptual framework to explore the gap between health research evidence, policy and practice because epistemologically, it emphasises the fluid, dynamic and interactive processes between context, actors and objects that is congruent with interactive and social

models of research use; it is derived from studies seeking to understand the implementation of innovation and complex interventions in healthcare settings so it is highly attuned to the specifics of this organisational setting; and it encourages the recommended whole-system perspective on implementation research' (McEvoy et al, 2014. p.2). However, NPT focuses on the latter stages of diffusion when issues of sustainability and innovation entrenchment are considered, which is at a stage later than I estimate the NICE guidelines to be. As a result, NPT is best used in situations where the research interest is the routinisation of an intervention or innovation in everyday practice, and may be inappropriate for evaluating innovations and interventions which are new or not yet at the stage where routinisation is considered.

Similarly to NPT, PARIHS is less applicable to the context I am exploring. Helfrich et al (2010) argue that, due to its broad definition of what constitutes 'evidence' as well as an attempt to encapsulate the multiple facets of implementation, the PARIHS model is flexible enough to be applicable to a range of settings. However, the 'evidence' construct for PARIHS is not as versatile as the 'innovation' construct of the Greenhalgh et al model since, by definition, the focus is on 'evidence'. Whilst it may be argued that PARIHS can be used to focus on the evidence behind an innovation, the Greenhalgh et al review (2004a) shows that evidence is not the only factor behind an innovation. Indeed, the 'evidence' construct and its sub-constructs omit a number of the sub-constructs in the Greenhalgh et al model (2004a), such as 'relative advantage', 'task usefulness' and 'compatibility'. Additionally, whilst PARIHS' 'context' and 'facilitation' constructs and their sub-constructs are similar to 'inner context' and 'linkage' constructs in the Greenhalgh et al model (2004a), the PARIHS framework omits the 'outer context', 'communication and influence', 'adoption', 'innovation consequences' and 'implementation sustainability' constructs that are covered by the Greenhalgh et al model (2004a). The lack of capacity to account for these constructs means that PARIHS may not be able to provide the rich level of data and opportunity for deep analysis that can be afforded by the Greenhalgh et al model. Additionally, another limitation of PARIHS for my research aims and objectives is that it forces

users to describe constructs along a low-to-high continuum, which implies a linear relationship between constructs that is an antithesis to the concept of dynamic relationships that PARIHS tries to convey (Helfrich et al, 2010). This linear relationship, even if unintended, might restrict my ability to explore interrelationships within my themes.

However, whilst both the PARIHS framework and NPT may not be fully applicable to my setting, it is important to note that the developers of the PARIHS and NPT acknowledge some of these issues and suggest that PARIHS and NPT can be used in combination with other conceptual frameworks (Helfrich et al, 2010; Finch et al, 2012). Consequently, the limitations of the models outlined above may be mitigated if used with another model. However, using more than one conceptual model would be likely to lead to an increase in the complexity of analysis, particularly as there would most probably be overlapping constructs. The time and resources required to use more than one conceptual model in order to mitigate the limitations of any one model are beyond the scope of my PhD research.

Damschroder et al argue that, as a 'meta-theoretical' framework that encompasses constructs from other models, the CFIR represents 'a beginning foundation for understanding implementation' (2009, p.12). The 39 constructs of CFIR may provide a greater capacity to account for complexity than the NPT and PARIHS models. Additionally, whilst Fredriksson et al (2014) argue that the CFIR's focus on the clinical setting limits its ability to be used in more policy-orientated contexts, its explicit acknowledgment of the outer context, and its inclusion of a greater gamut of recognised diffusion of innovation processes (rather than focusing, as NPT does, on routinisation), make the CFIR more applicable to the context I am researching than the NPT and PARIHS models.

The CFIR has also been shown to be used while deploying methods similar to those I have used for my PhD research. In a paper by the developers of CFIR, Damschroder and Lowery (2013) detailed the steps in their use of CFIR to analyse the implementation of an obesity management tool. Using coding of retrospective qualitative interview data within and across cases (via a matrix framework), the authors argued that the CFIR constructs were able to distinguish between low and high

implementation effectiveness. This was achieved by comparing case studies with high participation rates in the obesity programme with case studies with low participation rates. By comparing and contrasting the qualitative data from the different case study sites, Damschroder and Lowery were able to discern any patterns in the CFIR constructs that distinguished between implementation effectiveness.

As a relatively recent model the CFIR is open to iterations (Damschroder and Lowery, 2013; Consolidated Framework for Implementation Research, 2015). However, it is unclear how the CFIR adds to the more comprehensive model and meta-narrative synthesis of Greenhalgh et al (2004a). In particular, whilst the CFIR constructs overlap with a number of the constructs in the Greenhalgh et al model, CFIR does not have the same capacity to explain inter-relationships between constructs if they arise. This lack of capacity means that an otherwise useful and applicable model for exploring the diffusion of innovations is not appropriate for my research aims and objectives, as I require a model with the capacity to provide a richer level of analysis if complexity in the data emerges.

Out of the four models I have reviewed, the Greenhalgh et al model is the most comprehensive in terms of number of constructs. This is important because it provides greater potential flexibility to be used in different contexts. Whilst PARIHS and CFIR were originally focused on the clinical setting, the Greenhalgh et al model was intended to be used in the healthcare context in general, including administrative and management areas where there may not be a direct link to patient outcomes (Greenhalgh et al, 2004a). Additionally, whilst NPT focuses on sustainability and routinisation, the Greenhalgh et al model accounts for all phases of the diffusion of innovation.

The Greenhalgh et al model also has the potential to account for complexity. As a meta-narrative synthesis based on diffusion of innovation literature and primary evidence, the constructs in the Greenhalgh et al model have detailed explanations and evidence behind them. This means that, throughout the use of the model, I can refer back to Greenhalgh et al (2004a) in order to explore the constructs in greater depth and corroborate or refute the evidence and arguments behind them. This

allows for more in-depth analysis and linkage as to what my data means in the context of the diffusion of innovation literature.

The potential to account for complexity in the Greenhalgh et al model also lies in the dynamic relationships found in its constructs and sub-constructs. The Greenhalgh et al model clearly depicts that the diffusion of innovation is an iterative process where constructs can modify the influence of other constructs. Whilst all four models acknowledge this dynamism and complexity in theory, their operationalisation is predisposed towards ease of use and the provision of baseline assessments. NPT, PARIHS and CFIR may be more useful for studies that look at implementation over time, or low-resource implementation studies, but one of the problems of the relative simplicity of the operationalisation of these three models is that they tend towards rigidity for the sake of facilitating comparative analysis and baseline assessments. This relative rigidity means that they are less able to provide a researcher with rich, deep and contextual data. The trade-off between ease of use and capacity for complexity depends on the project, though the field of implementation science is stronger for having both options. For all the reasons I have given above, I chose the Greenhalgh et al model as my conceptual framework.

3.6.2 Choice of model: Greenhalgh et al's diffusion of innovation model

Using the Greenhalgh et al model
My approach to using the Greenhalgh et al model is influenced by the notion that the best approach to researching the complexity in diffusion of innovations is to explain this complexity through conceptual models rather than reduce it only to variables that can be measured. In this respect, my approach is grounded in the following argument: 'because of the complexity of the innovation, the dynamic and contingent nature of the implementation process, and the shifting environmental context (political, economic, technological), complex service level innovations are inherently unpredictable and [that] the search for reproducible "effect sizes", "mediators", and "moderators" is likely to prove fruitless. The best we can do is to explain what is happening as we observe it and reflect

on it in a theory driven way. Our goal (which contrasts with that of many programme evaluators) was thus interpretation rather than prediction' (Greenhalgh et al, 2008, p.2)

This approach contrasts with authors who argue that to advance implementation science, constructs need to be measured (Chaudoir et al, 2013; Proctor et al, 2011). Such authors argue that it is only through the measurement of constructs that models can be operationalised to help predict whether certain constructs lead to specific outcomes (Chaudoir et al, 2013; Tabak et al, 2012). Tabak et al (2012) argue that, because dissemination and implementation research is relatively young, constructs are currently assessed using open-ended questions, and the reliance on open-ended questions means that standard measures are lacking, with the development and evaluation of standard measures being further hampered by the small sample size of studies in dissemination and implementation research.

However, whilst there may be operational and policy use in measuring constructs to predict implementation outcomes, I believe that using constructs to qualitatively describe and elicit information can still advance and add to implementation science for three main reasons. Firstly, Chaudoir et al (2013) acknowledge that there are methodological challenges in quantitatively assessing certain constructs. For example, constructs such as political contexts or the role of informal communication may be better explored through a qualitative approach. Models that ignore such constructs due to their difficulty in being quantitatively measured may overlook important influences on implementation. Cook et al (2012) acknowledged that quantitative measurement may not be an appropriate approach to measuring all constructs, and suggested using a mix of a quantitative survey, semi-structured interviews and collection of administrative data. However, no explanation or discussion to support these suggestions was given by the authors. Secondly, the use of open-ended interview questions in Cook et al's (2012) attempt to operationalise Greenhalgh et al's model suggests that certain constructs are best served with open-ended exploratory questions. Whilst standard measures may provide the benefits of delivering baselines for comparison, they may also be inappropriate for gathering rich information for a particular construct. Thirdly, there is a lack of

consensus as to what is meant by implementation outcomes, and therefore what can be measured and what an effective implementation outcome looks like. For example, Proctor et al (2011) define implementation outcomes as the effects of deliberate actions to implement new treatments, practices and services. They argue that implementation outcomes include adoption, fidelity, and sustainability, all of which they state serve as indicators for the success of implementation (Proctor et al, 2011). In Greenhalgh et al's conceptual framework the 'implementation outcomes' identified by Proctor et al were part of the entire iterative process of spread and sustainability of innovations, rather than outcomes per se. I chose to use the Greenhalgh et al model to explore and provide a rich picture of the processes of dissemination and implementation in NHS acute Trusts, rather than provide quantitative measurements.

One of the challenges in operationalising the Greenhalgh et al model is determining the extent to which the model can balance the capacity to acknowledge context with the provision of conclusions that may be applicable to contexts outside of that being studied. The number and combination of variables potentially relevant to the diffusion of an innovation can change in any given context. Each construct within the diffusion of innovations can be a modifier of other constructs, meaning that the effect of one construct is dependent on how other constructs manifest. The result is that the implementation of the same innovation can have vastly different diffusion paths in different contexts (Helfrich et al, 2010). Whilst the Greenhalgh et al model tries to account for this complexity by describing dynamic relationships in the constructs of its framework, it also acknowledges that constructs are modifiers and recognises the contextual nature of diffusion. This suggests that, rather than attempting to provide generalised a priori predictions of the strength of relationships between constructs and variables, diffusion of innovation research may be best served by a deductive approach that explains diffusion after the data have provided the context, so that practical lessons can be learned. I therefore adopted a data-driven approach – using the evidence gathered from the interviews in conjunction with the model to provide an explanation of diffusion in its context – rather

than attempt to make generalisable explanations of strength. This can nevertheless provide rich lessons applicable to a range of settings.

Overlapping constructs

It should be noted that by choosing one model I will not necessarily exclude the constructs of all other models (Tabak et al, 2012). Through their categorisation of 61 models in dissemination and implementation research, Tabak et al (2012) note that 'there is substantial overlap between models, as the included constructs are often similar' (p.8). This view reiterates Damschroder et al's earlier paper (2009) and is important to note because it suggests that my choice of the Greenhalgh et al conceptual model does not necessarily mean that my coding will omit important constructs from other models.

There was, nevertheless, an alternative to choosing the Greenhalgh et al model or indeed any of the other models described in this chapter. That alternative was to pick and choose from the constructs of a wider range of models. Brehaut and Eva (2012) argue that there is a tendency for researchers to align themselves to one theory, and argue that researchers should avoid feeling restricted to a single theory, particularly in situations where no one theory meets their research aims or context, and should instead develop a new theory based on constructs of existing theories. This would allow context to be acknowledged by the new theory whilst maintaining the theoretical rigour of already validated theories (Brehaut and Eva, 2012). They note that some authors advocate the creation of contextual micro-theories, but argue that even the creation of micro-theories requires significant methodological work beforehand, and will need such work for every new context. Additionally, whilst such micro-theories may result in local applicability, they may lack generalisability (Brehaut and Eva, 2012).

A criticism of Brehaut and Eva's 'menu of constructs' approach is that taking constructs from other theories and forming them into a new theory with re-named constructs merely serves to add to the plethora of similar theories that already exist (Bandura, 1998). Another limitation of applying the 'menu of constructs' is that by removing a construct from its original theory, the conceptual

significance of that construct may be lost, as theories are not made up simply of a combination of constructs but of relationships between such constructs. By removing constructs from their original theories, the relationships that explain such constructs may be lost, along with the utility of that construct (Brehaut and Eva, 2012).

My preferred choice was to find a model that is comprehensive in the constructs it encompasses. One of the reasons I chose the Greenhalgh et al model is because it had the capacity to be used in different contexts and contained wide-ranging constructs which allow for flexibility. As a result, I did not feel the need to develop a contextual theory based on a menu of constructs, as Greenhalgh et al's model was able to meet my research aims and objectives.

Limitations of the model
Despite the comprehensiveness of the Greenhalgh et al model and its complement to my research objectives, it has four main limitations. Firstly, the use of the Greenhalgh et al model will share the same challenges as the use of other models – that is, overlapping constructs. The overlapping of constructs within models is an issue that can lead to challenges in operationalisation and has been discussed in the literature with respect to CFIR, NPT and the PARIHS framework (Damschroder and Lowery, 2013; Helfrich et al, 2010; McEvoy et al, 2014). The capacity for complexity of the Greenhalgh et al model may make it even more vulnerable in terms of overlapping constructs. For example, its task usefulness and task relevance constructs can overlap considerably (as my Discussion chapter shows). However, diffusion of innovations is sometimes a complex process and dichotomisation of concepts may ignore the intrinsic inter-relations of certain constructs. For example, the need for effective communication can be a definition for a number of sub-constructs in the Greenhalgh et al model, and this would reflect the cross-cutting nature of communication. Nevertheless, greater distinctions between conceptual definitions are required to make it easier to map findings to constructs (Helfrich et al, 2010). This is an important point from an operational perspective, particularly when undertaking coding for qualitative studies. In using the Greenhalgh et al model for

my research, I attempt to add to the body of knowledge on the model and address any limitations the model may have in terms of its conceptual definitions.

Secondly, and closely related to the first point, is the extent to which the Greenhalgh et al model (2004a) can be operationalised. The Greenhalgh et al model was the most limited model in terms of operationalisation. The NPT can be operationalised by a clear and easy to use web tool that can be used by researchers for exploratory scoping and by policy makers to inform their implementation decisions. PARIHS has been operationalised by the ORCA survey tool, and the CFIR has a comprehensive online resource (although at the time of shortlisting the models, this resource was not yet available). The lack of simplified tool to operationalise the Greenhalgh et al model and comprehensiveness in terms of the number of constructs make it is less useful for studies looking to provide baseline assessments, or low-resource implementation studies. However, suggestions made by Cook et al (2012) for potential questions for survey tools may go some way to correcting this issue, but more work needs to be done to test these suggestions.

Whilst the Greenhalgh et al review (2004a) has been widely cited, it is perhaps the relative limitation in operationalisation that has resulted in its lack of use compared to the PARIHS, NPT and CFIR models, all of which now have systematic reviews of their application in studies (Helfrich et al, 2010; McEvoy et al, 2014; Kirk et al, 2016). Indeed, some authors have argued that the Greenhalgh et al model is not intended for operationalisation. In a 2008 paper on PARIHS, Kitson et al stated that the Greenhalgh et al model 'is not expected to be used in any practical way to guide actions. Rather, it is a mental representation of the many elements that need to be considered' (Kitson et al, 2008, p. 4).

The limitations in operationalisation of the Greenhalgh et al model (2004a) has become starker due to the availability of the CFIR toolkit (Consolidated Framework for Implementation Research, 2015). The toolkit has several benefits which make using the CFIR appealing. For example, the toolkit has an interactive easy-to-use tool to design an interview schedule, and an Nvivo project template for codes. Whilst the CFIR has fewer constructs than the Greenhalgh et al model, this is more a result of

granularity than a stark omission in a major domain (unlike NPT and PARIHS' omission of the 'outer context'). For example, 'structural characteristics' in the CFIR is one construct, whilst in the Greenhalgh et al model it is separated into 5 more granular constructs (size/maturity; formalisation; differentiation; decentralisation; slack resources). The new CFIR toolkit might allow the CFIR to strike a balance between parsimony and depth: by being more comprehensive than PARIHS and NPT in terms of number of constructs, but easier to use than the Greenhalgh et al model.

Thirdly, whilst Greenhalgh et al's model is based on evidence in diffusion of innovation research, the evidence they reviewed is varied. Conclusions derived from research in one context may not be generalisable. Greenhalgh et al's model is based on a review of a wide range of research studies in different geographical locations and in contexts such as clinical innovations and educational interventions. It is not clear whether such evidence is transferable to other contexts. For example, Greenhalgh et al cite a study of 1,247 hospitals in the US (Burns and Wholey, 1993, cited in Greenhalgh et al, 2004a). The study found that, rather than adopting an innovation for its quality, hospitals adopted an innovation in order to gain prestige and copy larger rivals that had already adopted the innovation. However, US hospitals operate under a different system from that of NHS hospitals, with different incentives, structures and payment models. Whilst thematically, competition and prestige in inter-organisational links may be relevant to NHS hospitals, the nuance of how this affects the diffusion of innovation may be completely different from the findings in US-based studies. However, because the constructs in the Greenhalgh et al model are based on a number of different studies that generally explore a similar issue, taken together they offer a general theme. As a result, whilst the constructs in the model may indicate themes to explore and consider, they do not indicate the level of importance of that construct to that particular context. Additionally, the constructs in Greenhalgh et al's model can be explored further, and the value of my PhD research would be in the application of their model in a particular context in order to add to our understanding of its use. The relative lack

of use of the Greenhalgh et al model compared to PARIHS and NPT represents an opportunity for my research to address a gap in how such a model can be used where and why (Damschroder et al, 2009).

The fourth limitation, which is related to the limitation above, regards the conceptual and definitional challenges faced when using models and constructs in different contexts. Whilst Greenhalgh et al made a concerted effort to chart the evidence for innovativeness, more conceptual and definitional problems, such as those described above, were given less detailed examination. For example, it is unclear whether the studies reviewed by Greenhalgh et al considered constructs in relative terms: the size of an organisation may be deemed large in one industry or location or context, but relatively small in others. This relativism can be extended to other constructs in Greenhalgh et al's model – functional differentiation may be the norm in generalist healthcare organisations but less so in technology start-ups, yet both have different norms and expectations of what would be considered an 'innovative' organisation. The issue of relativism is not only found in conceptual definitions and constructs. Burns and Wholey (1993, cited in Greenhalgh et al, 2004a) demonstrated that the impact of structural complexity on innovation is moderated by the stage of the diffusion process and the type of innovation (such as technical or administrative) being adopted. Similarly, Alder et al (2003, cited in Greenhalgh et al, 2004a) argue that, though structurally complex organisations might adopt innovations sooner, less structurally complex organisations might diffuse them more effectively. This means that, whilst thematically the constructs in the Greenhalgh et al model suggest areas which may require exploration, the potential of these constructs to explain the diffusion of innovation is determined by the relative and contextual factors of the research study: how researchers define the innovation and organisation, the stage of the diffusion, and the 'success criteria' for the diffusion of innovation. Such caveats and multiple qualifications appear to be a characteristic of diffusion of innovation literature and, rather than demonstrating low-quality research, this is indicative of the nuances in which such studies operate. Whilst the Greenhalgh et al model makes broad and general assertions as to the relationships of constructs, the models and its connections are based on the overall theme of the

evidence they reviewed. It is up to the individual research studies to test and contextualise their model, and in doing so add value to the body of literature and our understanding of diffusion of innovation (Tabak et al, 2012).

Points three and four above are often shared by models in this field. For example, Stetler et al highlight several limitations in the conceptualisation and definitions of constructs in PARIHS (Stetler et al, 2011). However, the sharing of limitations between models does not void the limitation itself. Indeed, because the Greenhalgh et al model does not offer explicit and operational definitions for all its constructs, studies that use the Greenhalgh et al model to code data might use varied definitions, making comparison of studies difficult. This problem is also compounded by the existence of two versions of the Greenhalgh et al model (2004a; 2004b).

It is unclear why Greenhalgh et al changed their original model, nor did they explain whether there were any advantages of the newer model over the original version (2004b). Additionally, it is unclear why some authors, such as Cook et al (2012), used one version rather than the other. This creates an element of confusion and is a further limitation in the operationalisation of Greenhalgh et al's model.

One of my PhD supervisors – Prof. Glenn Robert - was a co-author of the Greenhalgh et al (2004a) review. At that time, I decided not use my connection to seek clarification on the reason for the different model versions because I believed that the onus is on researchers to make the decision public. Whilst the research community would still benefit from a justification for different versions, in hindsight I should have sought clarification from Prof. Robert. It is important for early career researchers to incorporate a variety of research techniques at their disposal, and interpersonal communication is an important weapon in a researcher's arsenal. Interestingly, before I began my formal PhD, I conducted several informal discussions with staff members from NICE, and included information from these conversations in this thesis. However, my earlier belief that 'informal' research techniques should not be used during 'formal' research has since changed, and will be more readily employed in my research going forward.

Fifthly, whilst the Greenhalgh et al (2004a) conceptual model can be used in a multi-level approach, micro-level factors are emphasised less than macro and meso levels. This reflects earlier studies by Kimberly and Evanisko (1981) and Meyer and Goes (1988) which argued that organisational variables were more influential on an organisation's general innovativeness than individual-level variables. In particular, organisational variables such as size, functional differentiation, specialisation and decentralisation were argued to have more explanatory powers than individual-level variables such as leadership, although Greenhalgh et al (2004a) noted that organisational variables only showed the general innovativeness of the organisation, and do not predict the adoption of particular innovations. Nevertheless, the lack of focus on micro-level constructs may be a result of the limits of Greenhalgh et al's (2004a) scope rather than an indication of the lack of significance of such micro-level constructs to the diffusion of innovation. Conceptual models that focus largely on micro-level processes, such as the Theoretical Domains Framework (TDF), may offer richer explanations of individual and micro-level processes than Greenhalgh et al's model. Indeed, Greenhalgh et al (2004a) themselves state that, though they did not review the wider literature on leadership, it was likely that the wider literature would have valuable things to contribute to the discussion of diffusion of innovations. Nevertheless, whilst micro-level factors play a more prominent role in other conceptual models such as TDF, Greenhalgh et al's model does include leadership as a sub-construct of the inner context. This sub-construct derives from studies such as those from Van de Ven (1986) where it was argued that leadership was a fundamental factor in creating a context that fostered and facilitated innovation, and in a study of the characteristics of organisational leaders, Kimberly and Evanisko (1981) found that the education and 'cosmopolitanism' (external ties) of a leader were associated with the adoption of innovations in the organisation. Additionally, a study by Meyer and Goes (1988) found that, whilst the characteristics of organisational leaders did not influence the overall adoption of innovations, support of the innovation from organisational leaders had substantial impact. Though PARIHS and NPT lack capacity for multi-level analysis because of their omission of the 'outer context', they both have a

greater capacity than the Greenhalgh et al model and the CFIR to explain individual, group, and social actions with regards to implementation.

The above limitations in the Greenhalgh et al model suggest that no model can or should be used rigidly. Rather, models are continual works in progress that are enhanced through use in differing contexts (Tabak et al, 2012). I chose the Greenhalgh et al model because of its comprehensiveness in terms of the number of constructs, its capacity to be used to analyse all stages of the diffusion process, and the model's link to the Greenhalgh et al systematic review (2004a) which, as an early career researcher not familiar with conceptual models in this area, I considered beneficial. By using the Greenhalgh et al model in a new context I hoped to add to the body of literature by either providing suggestions to mitigate the limitations of the model or by highlighting limitations which should be the focus of future research.

3.7 Limitations of my review

There are three main limitations in my literature review. The first is the difficulty involved in defining the scope of the literature base I wished to explore. As Greenhalgh et al state: 'The literature on the implementation of innovations is particularly difficult to demarcate from the general literature on (a) change management; (b) organisational development; and (c) quality improvement. Perhaps unsurprisingly, we [Greenhalgh et al] found multiple overlapping theoretical models and methodological approaches' (2004a, p.221). One of the main reasons I had to define the scope as I did was to meet my research aims and objectives within the limited resources at my disposal. The concept of innovation was important in this regard, as by focusing on the conceptualisation of 'innovation', I was able to exclude other literature bases that may have been relevant but which did not have innovation as its focal point.

The second limitation is the pragmatic approach I adopted to the inclusion and exclusion criteria – in particular, the decision of what constituted 'diffusion of innovation' models. This pragmatism was a

limitation of my literature search as it introduced a large degree of subjectivity to the decision of which models to include. However, I was unable to find references on what could constitute a 'diffusion of innovation' model, and Damschroder et al (2009) note that there is no consensus on terminology and definitions between models in the diffusion of innovations. In lieu of further discussion in the literature base, I decided to only include models that were generally found in the wider implementation science literature base (and this was decided through the journals in which the paper was published or the citations, references or content of the article). Additionally, I considered that models were relevant to my diffusion of innovation scope if they explicitly discussed 'innovation', or if they referenced or were cited by papers for being relevant to diffusion of innovations. Nevertheless, I may have excluded potentially relevant models.

The third limitation is that my conceptual model was chosen largely through value judgement rather than an objective measure. This limitation may be highlighted by the difference between Tabak et al's (2012) description of the conceptual models and my own. Tabak et al (2012) categorised dissemination and implementation models based on: the flexibility of the constructs of the models ('1' meaning broad, loosely defined constructs and '5' meaning operational, detailed processes); whether the model is focused on dissemination, implementation or both; whether the model is applicable to the system, community, organisation or individual level; and whether policy creation or use is addressed by the model (Tabak et al, 2012) (see Table 9 below).

I do not agree with Tabak et al's categorisation, demonstrating the subjectivity of analysing models. I believe the Greenhalgh et al model explores dissemination and implementation in equal measure, should be rated as moderate ('3') for construct flexibility, and addresses policy issues. For NPT and PARIHS, I believe they are not applicable to the system setting and should be rated as '4' in terms of construct flexibility. For Damschroder, I believe the construct flexibility should be rated as 3. These differences demonstrate the challenges and value judgements inherent in assessing the applicability and operationalisation of conceptual models. Indeed, Tabak et al's initial agreement for the 'construct

flexibility' category was only 43%, and whilst disagreement was resolved via consensus, it was not clear what consensus method was used.

Table 9 - Tabak et al's categorisation for selected conceptual models (adapted from Tabak et al, 2012)

Models		Dissemination and/or Implementation	Construct flexibility: broad to operational	Socio-ecological level				
				System	Community	Organisation	Individual	Policy
	Greenhalgh et al, 2004	D>I	4		X	X		
	NPT	I only	3	X	X	X	X	
	PARIHS	I only	3		X	X	X	
	CFIR	I only	4		X	X		

3.8 Chapter conclusion

As my interest was in diffusion of innovation research, I considered that it was important to explore whether there was a model that could potentially be applicable to study the implementation of non-clinical guidelines from a diffusion of innovations perspective. This meant that my interest was in a model that conceptualises any product, service, process or way of working as an 'innovation' – specifically, a framework which would allow me to conceptualise 'guidelines' as 'innovations'. In essence, rather than adding to the growing list of available models, I wished to test what I believed would be a model that is flexible yet robust enough to be able to be used to explore the diffusion of innovations in a wide range of contexts.

This chapter has described some of the conceptual models that can help explore the diffusion of an innovation: NPT, PARIHS, CFIR, and Greenhalgh et al's model (2004a). NPT is concerned with the routinisation and embeddedness of an innovation rather than with the initial introduction of an

innovation. This is important to note because I did not believe the NICE workplace guidance was at a stage where the questions of embeddedness and routinisation could be asked. Because of this, I sought a model that was more applicable to the initial introduction of an innovation, where the outer contexts, organisational context and characteristics of the innovation may be more predominant as constructs than the embeddedness and sustainability of an innovation within an organisation. I did not choose the PARIHS framework for my conceptual model because the aim of the PARIHS framework is to represent the main determinants for successfully implementing research into clinical practice (Helfrich et al, 2009). As a result, it may not be appropriate for non-clinical interventions. Specifically, any innovation that cannot be assessed using the evidence scale and its sub-scales may not be effectively explored using PARIHS. Indeed, even if an innovation or intervention can be assessed through the 'evidence' scale, PARIHS does not measure other innovation attributes such as relative advantage, usefulness and complexity. The CFIR model appeared more applicable to my research than NPT and PARIHS. However, whilst CFIR attempted to perceive limitations in 19 conceptual models, and whilst the Greenhalgh et al model was one of the 19 models whose constructs Damschroder et al (2009) used to develop the CFIR, it was not clear how the CFIR added to the Greenhalgh et al model. Ultimately, Greenhalgh et al's model was a more comprehensive review of implementation literature than Damschroder et al's paper, and I believed the depth of Greenhalgh et al's review would serve me better when applying their model to my research. Therefore, the conceptual model that best meets the research aims and objectives of my PhD research is the Greenhalgh et al (2004a) model.

McEvoy et al (2014) recommend that researchers provide an explicit rationale for choosing the model they apply, and state that in doing so 'authors will be making a contribution to implementation theory' (McEvoy et al, 2014, p.11). I have attempted to provide my rationale for using the Greenhalgh et al model in my literature review, conceptual framework and discussion chapters, as well as comparing my findings to the literature. Additionally, Tabak et al (2012) argue that it is important for existing models to be applied in research as it helps with the distillation of the particular model and provides

a better understanding of the model constructs. My review has attempted to find the most applicable model to be applied to my research. Therefore, there is a strength in my research using the Greenhalgh et al model, not only because it provides a conceptual logic to the research that is underpinned by a diffusion of innovation model, but because in applying the model I can further explore and understand its constructs, building on the findings of Greenhalgh et al and demonstrating the application of the model to research involving the dissemination and implementation on guidance in healthcare organisations (Tabak et al, 2012). That said, my review has demonstrated that the Greenhalgh et al model has limitations and gaps, such as the lack of clear definitions for its constructs, which my research will aim to help address.

4. Design and methods

4.1 Introduction

In this chapter I will outline the methods used in this thesis and their appropriateness for understanding the processes of dissemination and implementation of the NICE workplace HWB guidance in three NHS acute Trusts. I will adopt the approach taken by qualitative researchers such as Yin (2011, 2014) and Gomm et al (2000) who describe the steps required for robust qualitative methodology based on case studies. Adopting a case study methodology is an effective strategy for the purpose of this research because it helps explore 'how' and 'why' questions in contexts where events are explored and accounted for through rich explanation (Yin, 2014).

I will first (in sections 4.2 and 4.3) elaborate on the case study design and methodological approach as well as describe how the case studies were chosen. I will outline the ways in which I met Yin's (2014) criteria for high-quality qualitative case study research in this project. I will discuss the use of interviews as the main source of evidence, the establishment of a chain of evidence, and the steps taken to be able to make inferences via case study research. I will also describe the influence of the methods chosen on the level of generalisability and applicability in the findings of this PhD project. In the first part of the chapter I will also discuss how the case studies were chosen and the limitations of the method.

In the second part of this chapter (sections 4.4 through to 4.8) I will describe how I chose the case studies, as well as outline the ethical considerations. I will discuss the strengths and limitations of interviews as a research method, and I will outline the alternative data-gathering methods I considered before settling on conducting one-to-one interviews. I will discuss the debates regarding thematic saturation in qualitative research, and describe the use of non-probabilistic purposive sampling and the development of the interview schedules. I will describe the interview logistics and pilot interviews and outline the ethical considerations.

In part three of this chapter (section 4.9) I will describe the coding framework. I will outline the development of the codes based on the Greenhalgh et al conceptual model and the process of coding using the framework approach (Ritchie et al, 2014; Smith and Firth, 2011).

4.2 Study design and methodological approach

The design of this study has the following major features:

1. Three case studies of NHS Trusts, which vary in terms of their performance in the Royal College of Physicians audit on the implementation of NICE workplace guidance (2011).

2. Semi-structured face-to-face interviews with 62 participants (57 from the Trusts and five from NICE) ranging from key NICE members to Board-level, middle-management and junior and administrative staff in the Trusts. The interviews focused on processes, chain of events and barriers and facilitators to dissemination and implementation.

3. A thematic analysis using the framework method (Ritchie et al, 2014) and based on a priori themes derived from Greenhalgh et al's (2004a) diffusion of innovation framework.

Yin (2014) identified criteria – or 'tests' – for high-quality qualitative case study research: construct validity; internal validity; external validity and reliability; and subsequently identified the tactics that would help meet these tests (Yin, 2014, p.45). I considered each of these criteria in the study design. Below, I describe the ways in which they were achieved.

4.2.1 Construct validity

The first test, construct validity, refers to adopting the most appropriate design and methods for the study being undertaken. Yin (2014) suggested that this could be achieved by using multiple sources of evidence (triangulation of evidence), establishing a chain of evidence and having key participants or stakeholders in the research project review some or all of the case study report. There are four main methods of triangulation (King and Horrocks, 2010): methodological triangulation, which uses

different methods (such as mixed-methods approach) to address the research problem; investigator triangulation, which compares the data collected by different researchers on a project; theory triangulation, which uses different conceptual models to analyse the data; and data (or evidence triangulation), espoused by Yin (2014). However, not all authors advocate the value of triangulation. For example, King and Horrocks (2010) and Mays and Pope (2000) argue that triangulation should be seen more in terms of encouraging comprehensiveness and reflexive analysis than leading to genuine validity because it 'assumes that any weaknesses in one method will be compensated by strengths in another, and that it is always possible to adjudicate between different accounts' (Mays and Pope, 2000, p.51). For example, incomplete information from one interview may not be rectified through document analysis; or if two sources produce conflicting accounts, it is unclear how this will validate findings (King and Horrocks, 2010). Nevertheless, document analysis – even in an informal and unstructured style – can provide the necessary background to allow for smoother running of interviews (for example, to minimise unnecessary requests for clarification) (Yin, 2011).   I used methodological triangulation by using interviews as the main method of the project and formal and systematic document analysis as another method. For the document analysis, I examined Trust documents where they were readily accessible and referred to in interviews or through prior informal searches. In addition, data (evidence) triangulation was achieved by interviewing multiple staff levels and interviewing employees of NICE (see section 4.8 in this chapter). Conducting interviews at multiple staff levels helps provide a richer picture and deeper analysis for the research project, with the by-product of strengthening the construct validity of the project.

Concerning Yin's (2014) suggestion of establishing a chain of evidence, I achieved this through the transparency and structure of reporting. For example, the statements and conclusions I make in the results chapter are backed up by links to specific quotes from interviews, I describe in this (methodology) chapter how such evidence was collected and under what circumstances, while in the discussion chapter I link the evidence and methodology to the research aims and objectives. Finally,

relevant parts of this thesis were reviewed by key stakeholders from NICE and the Trusts so that they had the opportunity to corroborate question the findings – this meets Yin's (2014) third suggestion to achieve construct validity.

4.2.2 Internal validity

The second of Yin's (2014) criteria, internal validity, refers to the steps needed to be able to make inferences, although qualitative case study research can help establish associations rather than causal links. Yin (2014) suggests a number of techniques that help strengthen inferences made in case study research: pattern matching, explanation building, addressing rival explanations and using logic models. A fifth technique is suggested as being appropriate for research using multiple cases: cross-case synthesis. As described throughout this chapter, I achieved cross-case and cross-sectional synthesis in this thesis through thematic analysis of interviews in three case studies using the framework method of coding and basing the a priori themes in an established conceptual framework (Greenhalgh et al, 2004a). I also considered rival explanations to my findings (see Discussion chapter).

4.2.3 External validity

The third criterion, external validity, refers to the level of generalisability that can be made based on the conclusions of a study. Case study research seeks to find the conditions under which specific outcomes occur (or do not occur), and the processes by which they occur (George and Bennett, 2004). This forms part of the 'how and why' questions Yin (2014) highlights as being the strength of the qualitative case study design, which is able to explore and account for rich contextual information. However, the exploratory depth of case study methodologies may come at the expense of generalisability. George and Bennett (2004) state that case study methodologies require a trade-off between the goals of reaching a parsimonious theory, developing rich explanations, and requiring a manageable number of cases. This means that the greater the exploratory depth within a case, the less explanatory power across different types of cases (George and Bennett, 2004, p.31). In order to

gain an element of rich explanation across different types of cases, researchers are likely to have to sacrifice theoretical parsimony and generalisation. However, George and Bennett (2004) argue that researchers can achieve generalisations contingent on well-defined cases and sub-types by accumulating rich exploratory cases. Whilst this may be beneficial in health services research, generalisability may not be of key importance to practical considerations. In their review of frameworks that assess external validity, applicability and transferability in health research, Burchett et al (2011) argue that policy and decision makers are less interested in whether a study is generalisable across a broad population, and more interested in whether it is applicable (the likelihood that it can be implemented) and transferable (the likelihood that it can be replicated) to their own context or organisation. In addition, the mistake, as Yin (2014) argues, would be to seek or require statistical generalisation from case study methodologies as that is neither feasible nor indeed desirable (as that is likely to require a sacrifice of depth). Whilst statistical generalisation is concerned about the level of confidence with which an inference about a sample of a population can be extrapolated and generalised, analytical generalisation is concerned with 'corroborating, modifying, rejecting, or otherwise advancing theoretical concepts' (Yin, 2014, p.41). Gomm et al (2000) argue that, by basing results in a broader theory, analytical generalisation can help generalise that theory to similar cases. The emphasis should therefore be on the theoretical and explanatory relevance rather than statistical representativeness. Consequently, analytical generalisation is achievable by rooting the research in a conceptual framework and thereby the case study becomes an 'opportunity to shed empirical light about some theoretical concepts' (Yin, 2014, p.40). These debates can be linked back to the considerations for this PhD project. It was important to expand our understanding of diffusion of innovation as the literature review and conceptual framework chapters suggested that there are still contexts and conceptualisations that lack exploration. Analytical generalisability was therefore required and, by basing the coding framework on the Greenhalgh et al conceptual model, I have been able to link the research findings to theory, thereby creating an opportunity for theoretical and explanatory relevance. Statistical generalisation was not appropriate as my intention was not to

generalise the research findings to all NHS Trusts, but rather to ensure that the findings are useful for policy and decision makers and applicable and transferable to NICE and the NHS Trusts whose contexts are relevant. I achieved applicability and transferability by using a stratified sample of multiple case studies, ensuring an appropriate balance of depth and breadth, and by developing interview schedules that focused on organisational issues of policy, practicality and implementation.

4.2.4 Reliability

The fourth of Yin's (2014) criteria, reliability, refers to the ability to repeat the methods used in a given study. I provide the transparency necessary for the repeatability of the methods used by documenting the methods used in this research, and reflecting (in the Discussion chapter) on the effectiveness and appropriateness of the methods in light of the results. Yin's criteria (2014) echo those of other authors, who have suggested similar ways to strengthen the methodological rigour of qualitative research. For example, Mays and Pope (2000) suggest that, whilst no one technique can ensure the validity of a research study, triangulation (using different sources of evidence), respondent validation (allowing research participants to check findings and reports), transparency (through clear explanation of methods), reflexivity (through an introspection of how the researcher's prior assumptions or experience may influence the research process and collection of data), 'deviant case analysis' (that is, an exploration of alternative explanations and data that may contradict emergent findings) and 'fair dealing' (the inclusion and exploration of different perspectives in the research) all work to improve the validity of qualitative research. Conversely, authors who take a postmodern approach to qualitative research reject the notion of 'quality criteria', arguing that external criteria cannot be used to assess what is a deeply personal interpretation of the outside world. However, as one of the intentions of this research project is to have the findings used for policy purposes, it is important that the research should clearly demonstrate quality (King and Horrocks, 2010).

4.3 Justification of methods

I chose to conduct qualitative interviews because they can help explore the reasons and motivations behind certain decisions and actions and can help expand on context and events (Yin, 2014; 2011). Interviews allow issues to be explored in greater depth than would occur if a closed-question survey were to be administered (Yin, 2011). This was particularly important for my research as interviews had the capability of highlighting a complex picture where different staff levels interact at different stages in the diffusion of innovation.

Box 7 below sets out the general advantages and disadvantages of interviews as a method for collecting data. A number of these may depend on the interviewer or project. For example, not all interviews are intrusive. Whilst there may be a risk that an interviewer can influence an interview (for example, the extent to which 'don't know' answers are accepted or probed), this may largely depend on the respondent or the skills and experience of the interviewer. However, all interviews require logistical issues to be taken into account – for example, whether resources are required to travel to an interview site, the risk of recording more data than necessary, or how the interviews will be transcribed (I discuss my account in a later section). In addition, 'interviewer effects' and 'social desirability' responses may occur in interviews. This means that respondents answer in a way that they deem socially desirable or answer in a more positive or negative manner to provide more interesting responses (McColl et al, 2001; Doody and Noonan, 2013). The Boorman Review (2009a) and RCP audit (2011) may have meant that interviewees are more conscious of processes that may be ineffective and therefore downplay them, or conversely may over-emphasise their Trust's policies on staff HWB. However, this risk can be mitigated through confidentiality agreements (McColl et al, 2001).

Box 7 - Advantages and disadvantages of interviews with regard to collecting data

Advantages	Disadvantages
• They are useful to gain insight and context. • They help participants describe what is important to them. • They are useful in generating quotes and stories. • They enable the researcher to develop a rapport. • They give the researcher the opportunity to observe as well as listen. • They enable more complex questions to be asked. • The researcher can explain the purpose of the research and answer any questions the participant may have about the study. • The researcher can probe the participant's responses and seek further clarification. • Participants can seek clarification of a question. • They help the participant to give detailed responses. • Can explore participants' reasons for acting in a certain way or their interpretations of events. • They are more appropriate for certain groups, such as those with reading or writing difficulties. • Interviews can be a rewarding for participants as they stimulate self-exploration and discovery. Personal benefit: the telling of one's story.	• They may seem intrusive to the participant. • They are time-consuming, not only in terms of conducting them but also in relation to arranging them, travelling to the venue, post-interview transcription and analysis of the data. • They can be expensive compared with other methods. Interviews on a personal and/or intimate subject can evoke strong feelings and these feelings need to be handled with great sensitivity. • They are susceptible to bias, which may include: — The participant's desire to please the researcher. — Saying what they think/feel the researcher wishes to hear, such as giving an official point of view rather than their personal view. — The desire to create a good impression may lead to participants not answering honestly. — There is a tendency to say something rather than nothing if the participant cannot answer a question or has nothing to say on a topic. — The researcher's views can influence the participant's responses by expressing surprise or disapproval.

Source: Doody and Noonan, 2013

Some authors have questioned the very place of interviews, arguing that they create as much as

analyse social constructs and consequently we should be wary in automatically using them to

understand the world around us (Back, 2012; Miller, 2012; Have, 2012). Back (2012) argued that

interviewers should not believe that the 'interview' is an authentic reflection of a participant's inner

voice, beliefs and experience. Whilst this epistemological stance may hold some credence, it can be

argued that any public speaking or action to a certain extent is a stylised manifestation of our inner beliefs and experience. Interviews require a degree of trust between the interviewer and participant though it should be acknowledged that not everything the participant says may be taken at face value. Additionally, whilst it may be difficult to know whether a single interview accurately represents an interviewee's true beliefs, the representation of these beliefs as 'true' becomes more credible as patterns emerge into themes and data are gathered, corroborated and analysed using techniques described in this chapter.

Broadly, there are three types of interview: structured, unstructured and semi-structured. A structured interview is one where 'each participant is asked the same questions using the same wording and in the same order as all other participants' (Doody and Noonan, 2013, p.28). Whilst the results of structured interviews are easier to code and compare, the inability to probe and elaborate on answers means that researchers should generally only employ structured interviews to elicit socio-demographic data as the findings produce minimal depth compared to the other forms of interview.

In comparison, unstructured interviews can elicit rich and complex data by opening with one question and 'following the direction' of the answers of the interview. Indeed, this point highlights that an 'unstructured' interview is something of a misnomer as interviews will generally still be guided by very broad themes in order to garner relevant data. However, coding and analysing unstructured interviews is resource intensive as data will need to be matched and brought together from often amorphous transcripts (Doody and Noonan, 2013).

Semi-structured interviews are the most common type of interview. They use pre-determined themes and questions but leave scope for probes and elaborations (Doody and Noonan, 2013). I used this form of interview as it provided a greater degree of thematic consistency across interviews compared to unstructured interviews whilst at the same time providing the flexibility required to pursue pertinent lines of enquiry (Yin, 2011). This allowed for rich data to be gathered and helped the interview focus on the areas in which I was most interested. It should be noted that the quality of the

interview depends on an interviewer knowing how to control the scope of the interview and knowing when to probe and prompt (that is, knowing when to ask for clarification to a respondent's answer or to seek to focus and explore a particular thing that has been said by the respondent). I had undertaken formal training with NatCen in this regard, and also sought advice from a number of experienced interviewers. I used pilot interviews (4.6 below) to develop my skills, and carried out background reading on interviews and interview techniques (King and Horrocks, 2010; Gillham, 2005).

Alternative survey methods considered

I considered conducting focus group interviews for this project, as they would have provided a number of benefits in terms of eliciting data. For example, group interviews can help stimulate recall – which would have been useful when exploring dissemination and implementation processes that previously occurred. Group interviews can also help triangulate data from one-to-one interviews and are useful for elaborating on opinion (King and Horrocks, 2010). However, whilst the benefits of group interviewing can be realised through focus groups, the logistical issues of assembling a number of NHS staff together at the same time and the resource issue of finding a suitable room that would accommodate this, meant that conducting focus group interviews was unrealistic for this project. In addition, I was concerned about the risk of focus groups to conform and develop group norms (King and Horrocks, 2010), and was particularly concerned that if the focus group was formed of mixed staff levels, more junior staff may have felt intimidated by manager and senior manager grades, which would influence what they would ultimately say.

Remote interviewing was also considered, such as telephone interviews, video interviewing and instant messaging. Video interviews and instant messaging were quickly rejected because technical and security issues in NHS Trusts meant that departments did not have the required software. Telephone interviews were considered because they aim to maintain the advantages of face-to-face interviews while costing less. However, whilst telephone interviews can reduce 'interviewer effects' (visually, rather than audibly), and can reduce inter-reviewer variability by giving a greater opportunity

for an observer to sit in (provided the interviewee has given permission), they are not generally acceptable for complex questions, questions or responses involving lists, or questions with a large number of possible responses (Table 10 below), as respondents will need to maintain their string of thought for a long period, which may reduce reliability (McColl et al, 2001). I was also concerned that due to lack of direct contact, there might be a greater risk of telephone interviews being cut short. Given the project necessity to survey particular Trust staff, non-response bias needed to be avoided or at least minimised as much as possible, since it is likely there would be no other staff member with a similar role and responsibility desired for the survey. However, lack of direct contact may make it easier for the respondents to answer questions in a more forthright way (McColl et al, 2001).

Table 10 - Face-to-face interviews compared to telephone interviews

	Face-to-face interviews	Telephone interviews
General population samples	Usually best	Usually lower than face-to-face
Special population samples	Usually good	Satisfactory to best
Avoidance of refusal bias	Depends on good interviewer technique	Depends on good interviewer technique
Control over who completes the questionnaire	Good	Moderate
Gaining access to a named selected person	Good	Good for those with telephones
Locating the named selected person	Good	Good
Long questionnaires	Good	Moderate
Complex questions	Good	Moderate
Boring questions	Good	Moderate
Item non-response	Good	Good
Filter questions	Good	Good
Question sequence control	Good	Good
Open-ended questions	Good	Good
Minimise social desirability responses	Poor	Moderate
Interviewer's characteristics	Poor	Moderate
Interviewer's opinions	Moderate	Moderate
Influence of other people	Moderate	Good
Allows opportunities to consult	Moderate	Poor
Ease of finding suitable staff	Poor	Moderate
Speed	Poor	Good
Cost	Poor	Moderate

Source: de Vaus, Dilman, cited and adopted in McColl et al, 2001

The complexity and detail of the issues I was exploring necessitated the use of open-ended questions and open-ended probes, meaning that questionnaires were not appropriate for the project. As I was already interviewing the staff roles relevant to the project, I did not think that self-completion surveys would have been a useful source for triangulation or added value to interview findings, particularly given the time and resources needed for administering and analysing questionnaires. The use of questionnaires for this research project was therefore rejected.

4.4 Choosing cases

I identified the three NHS Trusts which are the focus of this study by using stratified sampling based on their performance in the first Royal College of Physicians (RCP) audit of the implementation of NICE workplace guidance (2011). One top performing Trust, one medium performing Trust and one low performing Trust were chosen. Because the audit results were the most direct available measure of whether Trusts met the recommendations of the NICE workplace guidance, using a stratified sample from the audit allowed me to explore whether contextual factors influenced the implementation of the NICE guidance and also to explore the diffusion of innovations conceptual framework in different settings. Using a stratified sample of the Trusts provided an opportunity for richness and depth of analysis.

Another option was considered in choosing Trusts. This option would have required using the health and wellbeing (HWB) indicators included in the annual national NHS staff survey[5] (Picker Institute, 2014) and creating a composite score for the staff HWB indicators, then choosing Trusts based on a stratified sample of the best, worst and median performing Trusts against the chosen indicators. However, given that the interest of this project is the implementation of NICE workplace guidance, the above method was not chosen because at best the data from the survey would have only provided

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[5] The NHS staff survey, in part, is a measure of HWB throughout Trusts.

a very indirect measure of the implementation of the guidance. This is because staff health can be influenced by a number of other variables outside the scope of the NICE guidance. It would therefore have been incorrect to presume without evidence that Trusts with good staff HWB were also Trusts that fully implemented the NICE workplace guidance.

The main challenge in choosing the Trusts from the RCP audit results was that the raw data were confidential and not available to the public. This was overcome in a meeting with the RCP, which agreed to help choose the Trusts in a way that would ensure confidentiality to all other Trusts that were not taking part in this project.

I asked the RCP to stratify the Trusts according to their audit performance in both the NICE 'Promoting physical activity in the workplace' (2008) and 'Promoting mental wellbeing through productive and healthy working conditions' (2009) guidance. The RCP then sent me an anonymous, coded table with three Trusts in the top quartile of implementing both those pieces of guidance; three Trusts in the second quartile; four Trusts in the third quartile; and five Trusts in the bottom quartile. From this table, and not knowing who the Trusts were, I chose three Trusts: one from the top quartile, one from the second quartile, and one from the bottom quartile – all of which were purposively chosen to be in different geographical locations. The RCP then contacted these three Trusts and sent them an information sheet about this research project. The bottom quartile Trust pulled out from my study, stating a lack of resources in their organisation. Consequently, the RCP helped me recruit a Trust in the second quartile. The Trusts were asked by the RCP whether they wished to take part in the research (with assurances that their names and information would be kept confidential by the project team) and whether they were happy for me to contact them. After the Trusts confirmed that they would like to take part in this project and that I could contact them, contact was made with a senior manager in the Trust and details of the project were discussed in more depth. This senior manager – referred to as the 'site captain' – helped with logistical issues for carrying out the project in their Trust, such as identifying key individuals in the Trust who met the inclusion criteria.

Research and Development approval was gained from each Trust (see Appendix D). Below is a brief description of the Trusts chosen.

Trust East

Trust East was in the second quartile of the RCP audit for implementing the NICE physical activity guidance and NICE mental wellbeing guidance.

This Trust is a Foundation Trust in the East of England with between 2000 and 3000 staff serving a population of between 200,000 and 300,000 people. The Trust was running with a financial surplus of nearly £4 million at the time of the interviews.[6]

Trust Metropolitan

Trust Metropolitan was in the top quartile of the RCP audit for implementing the NICE physical activity guidance and NICE mental wellbeing guidance.

This Trust is a large metropolitan acute Trust serving a population of well over one million people. The Trust underwent a merger in the last decade and now has a number of hospitals as part of the organisation, with several further satellite units. The Trust has between 8,000 and 10,000 staff and an annual turnover exceeding £800 million. The Trust was working towards Foundation Trust status, and had gone from having large financial deficits to currently having a financial surplus.

Trust Midlands

Trust Midlands was in the third quartile of the RCP audit for implementing the NICE physical activity guidance and NICE mental wellbeing guidance.

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[6] It should be noted that this description, and that of the other two Trusts, reflect the situation when the interviews were conducted in 2012.

Trust Midlands is a small specialist Foundation Trust in a semi-rural area and employs fewer than 2,000 staff. It treats between 80,000 and 100,000 patients a year. At the time of the interviews, it was planning to move location to a more urban area and to forge closer ties with the city's main Trust.

4.4.1 Limitations

A limitation in my chosen method was that there may have been a self-selection issue because 27% of NHS acute Trusts did not participate in the audit (RCP, 2011). This meant that only Trusts who had the resources to participate in the audit and were motivated and interested in doing so were included, thereby omitting a potentially useful cohort. However, there was no easy way of estimating the extent to which the NICE workplace guidance was implemented by the omitted cohort. It should also be noted that 73% of acute Trusts did complete the RCP audit, and that the results of the audit demonstrated a wide range in terms of the implementation of NICE workplace guidance.

An additional limitation is the lack of bottom quartile Trust from the audit. This was not intentional, and indeed was not for want of trying. The RCP provided me with a list of ten Trusts in each quartile corresponding to their level of implementation of the mental wellbeing and physical activity guidance. After choosing a bottom quartile Trust, the RCP contacted them to ask if they would like to participate in my study. Having initially agreed, the bottom quartile Trust pulled out from my study two weeks later, stating a lack of resources in their organisation. This suggested resources could be an issue, and highlighted differences between a bottom performing Trust and those in the top quartile. Nevertheless, it was this very reason that I wanted a bottom performing Trust as a case study. With the help of the RCP, we contacted another Trust in the bottom quartile, but they declined to participate. We then contacted more Trusts in the bottom quartile, who did not reply. Eventually, my project timeline and the burden on RCP resources meant that I had to choose a Trust from the third quartile. This limitation highlights again the issue of response and selection bias.

4.5 Ethical considerations

I sought advice from the Research Support Centre at UCL as to the most appropriate process for my study to take with regards to ethical approval. The recommendation was that I required R&D approval from each individual NHS Trust and NICE (rather than approval from the Research Ethics Committee). Each NHS Trust and NICE had a slightly different approval process, but commonly they all required information about my study, which I provided (Appendix E and F). Approval was subsequently gained from the participating Trusts (Appendix D).

One ethical issue that was considered for this project was that of confidentiality. It was important that this project provided anonymity to all participants and the Trusts, because the Trusts were chosen based on confidential data (RCP, 2011), and therefore the Trusts agreed to take part in this project on condition that this confidentiality was maintained. Participants were made aware that the interviews were confidential in the staff information sheet (Appendix E) and consent form (Appendix F). The staff information sheet and consent forms also made clear that participation was entirely voluntary and that participants could withdraw from the study at any time without prejudice.

Another ethical consideration I made was whether to carry on interviewing all the participants in the sample, even if it was determined during the coding of the interview transcripts that the themes emerging from the interviews were repeating themselves and that little or no new relevant data would be gathered in subsequent interviews. This was an ethical consideration because interviewing participants even after thematic saturation was reached could have resulted in wasted time and resources for both the participant and myself. I decided to continue to interview and record participants (unless they declined) even if I believed thematic saturation had been reached. Indeed, I felt that it would be unethical not to complete all interviews just because thematic saturation had been reached, as participants – after reading the information sheet and agreeing to be interviewed – may have wished to have their opinions heard and may have believed that they could still contribute

value to the project. Ultimately, this decision was not tested, as the timeline for the interviews did not allow me to transcribe and code until after most of the interviews had been completed.

There was a small possibility that some aspects of the interviews might involve discussing issues which respondents found sensitive – for example, views on the value of NICE guidance, or what the respondents believed were barriers to implementing staff HWB initiatives in their Trust. I minimised issues of sensitivity by maintaining confidentiality, so that respondents felt comfortable expressing their views. Confidentiality was maintained in the following ways: firstly, prior written consent was sought for tape-recording of all staff interviews. Secondly, staff involvement was entirely voluntary and assurances were given to participants that the interviews were entirely confidential. Thirdly, interviews with staff members were given a unique identifier code, coded for anonymity and stored in an encrypted computer with a time and date stamp. Fourthly, information obtained as a hard copy was stored in a locked file cabinet. Fifthly, personal data (names) will be deleted or shredded following UCL data security protocols after the research project is finished. To minimise the burden on participants, interviews were conducted at a time and place convenient to the participants and as such there was no particular order to when participants were interviewed.

4.6 Pilot interviews

There has been a debate as to the methodological usefulness of pilot studies in qualitative research (Teijlingen and Hundley, 2001). In a situation where multiple interviews are conducted, pilot studies are not necessary as interviews have a 'progressive' nature whereby the researcher will continually refine and improve questions as more information is obtained. Conversely, pilot studies allow a project scope to be refined and focus on the analytical topics being explored (Teijlingen and Hundley, 2001). Teijlingen and Hundley (2001) have argued that, pragmatically, pilot studies provide the prospect for early career researchers to refine their skills, and I believed this was a valuable opportunity for the journey of my thesis. The pilot interviews also allowed me to test the feasibility

of conducting the number of interviews I had planned, to assess whether the planned interview schedule was workable, to refine the interview questions and schedule and to assess the data coding and analysis techniques.

I conducted interviews with four people (not part of the final sample), all of whom had experience of occupational health and staff health and wellbeing policies and either currently worked or had worked in NHS Trusts. The interviewees were known contacts and the questions followed a draft semi-structured interview schedule. The interviewees were then asked their opinion of the interview and for their suggestions for improving the interview schedule. Because I had chosen the interviewees through known contacts and none were from the case study sites, the full benefit of conducting pilot interviews was limited (Teijlingen and Hundley, 2001). For example, I was not able to risk-assess any local political barriers that might hinder the main interviews, nor was I able to assess the logistical issues that might have occurred, such as recruitment of interview participants and travelling to the interview sites. In addition, three of the four pilot interview participants were senior-level professionals which meant that I was unable to gauge the effectiveness of the interview schedule for junior and administrative staff. I transcribed the interviews myself, which provided me with an opportunity to examine when I could have probed answers and prompted respondents (Doody and Noonan, 2013). This proved a useful experience for the main interviews. Through the process of pilot interviewing, I had reduced the number of questions I planned on asking and put a greater focus on thematic areas. I had also simplified the language of the questions and the question sequence. The pilot interviews provided valuable insights into the topics that might be discussed in the main interviews, but I was cautious not to make too many assumptions as to the data that would emerge from the main interviews, due to the differences between the pilot study participants and the main study participants. Instead, I sought to focus on the process benefits of the pilot study (Teijlingen and Hundley, 2001).

4.7 Interview process

I used 'gatekeepers' – senior contacts from each case study site – to help with interview logistics (King and Horrocks, 2010). One senior member from NICE and one senior member from each case study site were contacted at the time an official study research request was made. Once NICE and the Trusts had accepted the research request, I discussed the details of the project with the 'gatekeepers', who were able to help in identifying appropriate staff to contact, in arranging interviews and other meetings, and in facilitating document requests.

I formally invited all interview participants to take part in the interviews by means of a letter (Appendix G), staff information sheet (Appendix E) and a consent form (Appendix F). The staff information sheet and consent forms made clear that participation was entirely voluntary and that participants could withdraw from the study at any time without prejudice; this was reiterated at the start of each interview. Interviews were conducted at a time and place convenient to the participants and in consequence there was no particular order in which participants were interviewed. Interviews were face-to-face, audio-recorded and transcribed through a transcription service. The transcription service was experienced at transcribing confidential information and was recommended by colleagues. I followed suggestions by King and Horrocks (2010) to mitigate the risks to the quality of transcription: the recording quality was ensured by recording in a quiet room with up-to-date recording equipment; relevant contexts were noted on the interview transcript (for example, any sarcasm or the wider context such as elaborations on organisations they mentioned); and great care was taken when 'tidying up' the transcript for reporting to ensure that the meaning was not lost.

Each recorded interview was given a unique identifier code, with time and date stamp and stored on an encrypted computer. Whilst Mays and Pope (2000) suggest that respondent validation should be used where possible in qualitative research, I chose not to send the interview transcripts to each

interview participant as I was limited by resource constraints and believed that an accuracy check was not required for the transcripts as they had been transcribed verbatim.

Interviews were conducted over a narrow-as-possible timescale, taking into account resources and the availability of interview participants. The reason for a narrow interview timescale was to reduce the risk of context or 'history' effects (for example, if two Human Resource Directors were interviewed either side of a major event such as the launch of a particularly relevant national campaign, that might influence the most recent interview) (McColl et al, 2001). Context or 'history' effects may not be completely eliminated, and indeed it can be argued that such events offer an opportunity for further lines of exploration and comparison. Nevertheless, I wanted to minimise the risk of interviewees associating past events with current events when they otherwise would not have – for example, associating the development of a past staff HWB policy with a new national standard for NHS staff. Figure 5 below shows the timeline of the interviews that were conducted.

Figure 5 - Timeline for interviews

Most interviews lasted around 30-45 minutes, though the longest interview was around 1 hour 20 minutes and the shortest interview around 16 minutes. The intention of this interview length was to elicit enough rich information without reducing the quality of responses by over-burdening the participants with a long interview. This was based on the theory of respondent motivation, according to which respondent motivation may decline if interviews go beyond the optimal length of time (which depends on factors such as relevance and saliency to the respondents, the context and issue explored and the population surveyed) (McColl et al, 2001). When respondent motivation declines during a

face-to-face interview the quality of the responses during the interview may be affected. Therefore, my aim was 'to collect information that is "necessary to know" rather than "nice to know"' (McColl et al, 2001, p.85).

I took the quick reference guides for the two pieces of NICE guidance with me to each interview. During most of the interviews, I asked directly whether the interviewee was aware of the NICE guidance. When an interviewee was not aware of the guidance, or when it became clear during an interview that the interviewee was not aware of the guidance, I showed them the NICE quick reference guides. In these instances, interviews were momentarily paused to give the interviewee time to examine the quick reference guide and were resumed when the interviewee was ready to continue with the interview. I showed the quick reference guide to interviewees who were not aware of the NICE guidance because I wanted to explore their first reactions and because it allowed the interview to be contextualised within the NICE guidance (for example, interviewees who discussed their Trust's staff HWB policies were able to compare these to the NICE workplace recommendations).

Interviewees were sent a thank-you message after each interview, and an offer was made to provide the research findings. The site captains expressed particular interest in receiving findings from the results. I had contemplated three feedback methods for reporting to interviewees: a yearly report, a routine report (such as monthly) or an end-of-project report. Given the seniority and policy responsibilities of the site captains, I decided not to provide them with routine reports because the project was continually evolving and such reports might have given mixed messages to them. I was aware that providing an end-of-project report ran the risk of a loss of momentum and enthusiasm on the part of the site captains, but heeded Estabrooks et al's (2012) advice about the importance of checking, analysing and corroborating my analysis through peer review. By doing so, whilst there was a risk of lost momentum, I would ensure my recommendations had more veracity. An executive summary (the abstract of my thesis) was sent to the senior contacts at the case study sites, with an offer of more detailed discussions.

4.8 Interviews

4.8.1 Sample size

One of the most pertinent issues in qualitative interviewing is whether it is possible – or even desirable – to estimate the number of interviews to conduct prior to undertaking them. This issue is highly debated and depends on a number of other considerations, not least the theoretical perspective adopted for the research, as well as practical and logistical issues, the academic discipline in which the research project is grounded, the social context and group(s) being interviewed and 'saturation' (see Appendix L for a brief outline of the main debates).

Adler and Adler (2012) suggest three conditions in which a large sample size may be appropriate and recommended. Firstly, if the subjects are easy to find and numerous, a large sample size may be considered, though the researcher may also consider conducting a focus group. Secondly, Adler and Adler (2012) suggest that a larger sample is required if there is a stratified hierarchy in the subject setting (also known as theoretical sampling), when sub-groups are likely to vary in terms of perceptions, status, problems and decisions. Furthermore, similarly to the point above, the size or rarity of the population being studied (rather than the subjects per se) has a bearing on the appropriate sample to interview. For example, if the subject and population of interest were the power-dynamics of an elite corporate boardroom, fewer interviews might be required to reach a deep understanding than if the objective and population were much broader (Adler and Adler, 2012). This supplements Guest, Bunce and Johnson's (2006) earlier study which demonstrated that thematic saturation is reached at 12 interviews but only if the objective of the research is to identify shared perceptions, beliefs or behaviours amongst a relatively homogenous group (Guest, Bunce and Johnson, 2006). Indeed, even when the population is not heterogeneous, Bryman (2012) recommends attempting to capture a degree of variability in views. Thirdly, a large interview sample is required if the project involves multiple cases or if interviews are the only method used to collect data (Adler and

Adler, 2012). Stratification of three Trusts was an important consideration in the sample size chosen. This research project used three Trusts of varying performance in the RCP audit (2011) so that differences in processes might be highlighted; Langley (1999) contended that processes are mainly (though not completely) based on events and therefore may require fewer participants to obtain an understanding of events because perceptions of events are based less on varying opinion and more on shared experience and knowledge. Additionally, Guest, Bunce and Johnson (2006) argued that thematic saturation can be reached earlier if structured or semi-structured – rather than unstructured – interviews are conducted, as themes can more easily emerge in such interviews.

I estimated the maximum number of interviews across the Trusts that I would be able to conduct and analyse was around 66. This estimate was based on the arguments of the authors I set out above. For example, Back (2012) argues that the link to the analytical framework used in qualitative research is an important factor in determining the number of interviews conducted. Given that the Greenhalgh et al conceptual framework is based on evidence, I had anticipated that the findings from my interviews would not diverge a great deal from the themes in my conceptual framework. Additionally, the sample I chose was based on fairly narrow inclusion criteria relating to roles and responsibilities, or employment in the Trusts, and as such, the sample had a certain degree of homogeneity. Whilst my macro-meso-micro analytical framework produced a certain level of heterogeneity to my sample population by stratifying them into different levels, I was nonetheless satisfied thematic saturation would be reached because such sampling was purposive based on a set of pre-determined criteria. Purposive sampling was used as a method to select participants for this study because the aim was to achieve analytical rather than statistical generalisability (Yin, 2014; Guest, Bunce and Johnson, 2006). This meant that, instead of participants being randomly chosen, they were chosen because they were 'information rich' and specifically useful for meeting the research aims and objectives (Devers and Frankel, 2000).

Sample participants and inclusion criteria

With my estimate how many interviews might be needed to reach thematic saturation I collaborated with my senior contacts in each Trust, to draw up a list of the types of staff positions that were of interest to my research. The senior contact for each case study site then recruited participants iteratively until the estimate for the maximum number of participants was reached or until no further participants could be recruited (whichever was the sooner).

Four study populations spanning the macro-meso-micro levels were interviewed: key members of NICE (representing the macro level); NHS Trust senior-level management, such as board members and directors, and NHS Trust middle-management level, such as line managers (representing the meso level); and junior and administrative staff (representing the micro level).

Members of NICE were interviewed in order to explore macro-level issues and provide a perspective from the 'innovator'. This was important for developing a rich analysis based on the diffusion of innovation framework. Senior and middle-management staff were interviewed because of the influence these groups have on policy, on investing in human resources and on shaping the organisational culture (Boorman Review, 2009a). These issues are emphasised in the Boorman Review (2009a) as essential factors for effectively implementing HWB initiatives and in creating an HWB environment in Trusts. Additionally, NICE disseminates their guidance mainly through senior-level channels[7] and senior-level staff members set the overall HWB policies and strategies and establish an HWB culture throughout their Trust (Boorman, 2009a) while middle managers have the most management contact with staff and are therefore key to applying the disseminated policies (NICE, 2008a; 2009a; Boorman, 2009a). Junior and administrative staff were interviewed because analysis of diffusion of innovation is made richer by exploring multiple levels and it was therefore pertinent to explore whether – and, if so, to what extent and in what form – the NICE workplace guidance has

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[7] Discussion with NB, Associate Director, 18th January 2010

made its way through the organisation. Some junior staff were purposively chosen because they had specific knowledge and experience of the Trust's HWB policies and/or the NICE workplace guidance. In addition to the theoretical importance of these levels, more practical inclusion criteria were set for the purposive sample so that the interviews could provide more pertinent information and allow for analytical generalisation. The criteria are in Table 11 below.

Table 11 - Inclusion criteria for purposive sample

Staff level	Inclusion criteria
Senior and middle-management staff	A role or responsibility in relation to the dissemination and/or implementation of NICE guidance within the Trust, and/or;
	A role or responsibility in relation to workplace, human resources or personnel matters, and/or;
	A role or responsibility involving the HWB of staff.
Junior and administrative staff	Should have been a staff representative for mental or physical wellbeing and/or;
	Should have sat in development meetings for HWB initiatives and/or;
	Should have been engaged with by the Trust regarding staff HWB and/or;
	Should be staff currently working at the Trust (if it was not possible to find staff that met the first three criteria).
NICE staff	A role or responsibility in relation to the dissemination and implementation of NICE guidance and/or;
	A responsibility for the overall development process for the NICE workplace guidance.

I had reached the sampling number in Table 12 below partly by design (taking into account the arguments in the section above) and partly because this was the maximum number of participants I was able to obtain.

Table 12 - Number of participants interviewed in the three NHS Trusts

	Number of senior management staff interviewed	Number of middle-management staff interviewed	Number of junior and administrative staff interviewed	Total number
Trust Metropolitan	5	11	3	19
Trust East	5	5	6	16
Trust Midlands	7	9	6	22
Total number across all Trusts	17	25	15	57
NICE	5	0	0	62

Based on the previous assumptions regarding sampling size, I estimated that a minimum of five interviews per staff level in each Trust was sufficient to reach thematic saturation. Table 12 shows the actual number achieved. To allow me to explore whether there were any thematic differences between staff levels (for example, whether junior staff spoke about different themes to senior staff), I estimated that I would need to interview a minimum of five senior managers and five junior staff in each Trust. I also estimated that exploring whether there were any thematic differences between Trusts would require interviewing a total of 15 people per Trust. Therefore, I estimated that achieving 5 interviews per staff level per Trust (with a total of 15 interviews per Trust) would provide within case and across case saturation.

Where possible, I conducted more interviews to mitigate the risk that thematic saturation occurred later than anticipated. This estimation appeared to have been appropriate as I began seeing thematic patterns emerging after approximately ten interviews with the same staff level and positive thematic saturation was reached after approximately 15 interviews. Although only three junior staff were interviewed in Trust Metropolitan, this did not have an impact on saturation across the junior staff level, or saturation for Trust Metropolitan as a whole.

In addition to the above, the interviews with key staff at NICE served an important purpose in understanding the macro level in greater nuance than was documented in the NICE publications, thereby supplementing the interviews at the case study sites and drawing out findings based on the macro-meso-micro conceptual framework. Previous meetings and telephone conversations with NICE prior to and over the course of the development of the research proposal led to the estimate that five interviews would be enough to supplement the findings from the case study sites. With NICE, the sample being interviewed was largely homogenous, working in the same organisation, with relatively similar levels of responsibilities and all having experience of the same workplace guidance.

4.8.2 Development of the interview schedules

Developing an interview schedule and conducting an interview require planning and preparation. For example, whilst an interview guide may have themes rather than questions, the phrasing of any complex questions will nonetheless need to be thought of in advance as will the method of raising potentially sensitive discussions. Reformulation and rephrasing may be needed to ensure that relevant information is gathered. The order of themes and questions should also be considered as some questions may be required to provide the interviewee with a context or opportunity to 'warm up' whilst at the same time it may be prudent not to leave the most important questions to the end in case interviews run out of time or are cut short (Doody and Noonan, 2013).

I had discussions with my supervisors, in which the above issues were considered and multiple drafts of the interview schedule for this project drawn up. In addition, I discussed the interview schedule with participants of the pilot interviews to gain external feedback from the perspective of people in similar roles to those participating in the main interviews. It should be noted that this level of preparation gave me the foundation to be flexible during the conducting of interviews, without straying out of the project scope (King and Horrocks, 2010).

I based my interview topic guide on the interview schedule from Cullum et al (2004), who interviewed clinicians on the impact of (clinical and health technology) NICE guidelines. Whilst their interview schedule was not fully relevant for my project – it focused on clinical services and was not based on a diffusion of innovations model – it nevertheless proved a useful starting point as it contained questions to ascertain the processes of dissemination and implementation of NICE guidelines. I had also based my topic guide on the work of Cook et al (2012). Cook et al aimed to operationalise the Greenhalgh et al (2004a) model by providing definitions and measurements of what they considered were the model's key constructs. The recommended measurements were a mix of closed-question survey responses, open-ended interview questions, and administrative data. From a review of the literature, the authors developed example questions for a quantitative survey and example questions for a semi-structured interview schedule. The examples that Cook et al provided were useful for the development of my topic guide, though the authors only attempted to operationalise constructs they felt related to the implementation of an existing innovation so consequently did not operationalise constructs such as 'linkage' and 'innovation consequences'.

The goal of my interview schedule was to meet the aims and objectives of my research project. The semi-structured nature of the interview meant that it was inappropriate to have a long list of questions to ask the participant, as that would reduce the responsiveness and reflexivity to what the interview participant might say at the time, and would reduce the flow of the interview. Nevertheless, early drafts of the interview schedule contained a number of questions, which I subsequently reduced by considering their direct applicability to the research aims and objectives ('need to know' rather than 'good to know' (McColl et al, 2001)). Questions were then merged into themes so that the schedule drew on the conceptual framework for the theoretical underpinnings, such as exploring the innovation, the organisational context and the outer context. Questions focused on the 'how' and 'why' to elicit information that met the aims of the data collection.

Three interview schedules were prepared (see appendices H, I and J): one for senior and middle-management staff, one for junior and administrative, and one for staff at NICE. This was in order to reflect the different roles and responsibilities – for example, senior managers had policy-making responsibilities and experience of board meetings whereas more junior staff had experience of the staff HWB initiatives that were targeting staff. It should be noted that, whilst I was taking a neutral stance during the interviews towards the quality of the guidance, the quality of the guidance is an important factor on implementation (Grimshaw et al, 2004) so it was important to capture interviewees' perceptions of quality of the guidance (as an innovation).

4.9 Coding and data analysis

The use of a conceptual framework, interviews and case studies in this research project lends itself to analysing the interview data using thematic analysis (King and Horrocks, 2010). King and Horrocks (2010) identify three main types of thematic analysis, although they note that there are a number of alternatives and variations of these main types.

The 'classic' type of thematic analysis uses descriptive coding in the first stage, followed by interpretive coding and finishing with the development of overarching themes. It is predominantly 'bottom-up' in the sense that themes are developed a posteriori – emerging from the analysis and interpretation of the interview data. The 'classic' type is resource intensive for large data sets, as it typically requires 'line-by-line' coding of transcripts. Another approach to thematic analysis is 'template analysis'. Like the 'classic' approach, it uses line-by-line descriptive coding followed by more interpretive coding, but differs in that it uses a coding structure (template) that is applied to the data and iteratively revised until the researcher is satisfied that it captures their understanding (King and Horrocks, 2010). One version of template analysis is to develop the coding structure (using a mixture of a posteriori and a priori themes) based on a sample of the total interviews conducted, and then test the coding structure based on the rest of the interviews. If issues arise that do not fit the current coding structure well, the

structure is modified by either adding a theme or changing the definition of an existing theme. These iterations continue until the researcher is satisfied that the coding structure allows them to build an account of the findings. Another version of template analysis is to construct the initial coding structure mainly on a priori themes. The a priori themes may be based on a theoretical concept or the aims of a study or other considerations. The same iterative process is then followed (King and Horrocks, 2010). Whilst template analysis can be used in any size of study, King and Horrocks (2010) suggest that it is particularly suited to studies with around 10-25 interviews or in studies that compare two or more distinct groups.

Another version of thematic analysis is matrix analysis (which can also be done with a mixture of a posteriori and a priori themes). The central characteristic of matrix analysis is the visual tabulation of units of analysis (for example, individuals or organisations) against concepts or issues relevant to the research project. The visual element of the matrix approach facilitates the comparison of data across units and cases (King and Horrocks, 2010). The matrix approach tends to use a number of different matrices, depending on the issues or themes the researcher wants to explore. For example, one matrix may use organisations as a unit of analysis, allowing the researcher to compare the data from the perspective of organisations, whilst another matrix may examine the data from the perspective of individuals. Each matrix will explore key issues and concepts relevant to the research (King and Horrocks, 2010). For example, one matrix may focus on human resources, whilst another matrix may focus on financial resources of organisations (Tables 13 and 14 below):

Tables 13 and 14 - Examples of matrix analysis adopting a unit-by-unit matrix

Matrix 1

Unit	Main issue: Human resources		
	Sub-issue: Inter-personal relations	Sub-issue: Learning and development	Sub-issue: staff retention
Organisation A			
Organisation B			

Matrix 2

Unit	Main issue: Financial resources		
	Sub-issue: Internal cost pressures	Sub-issue: External cost pressures	Sub-issue: Long-term savings
Person A			
Person B			

As in the example below (Tables 15 and 16), an alternative version of this 'classic' matrix approach is to use a matrix on a case-by-case basis organised around key themes.

Tables 15 and 16 - Examples of matrix analysis adopting a case-by-case basis

Matrix 1

	Main theme: Health and wellbeing		Main theme: Stresses in job		Main theme: Hobbies	
	Sub-theme: Mental wellbeing	Sub-theme: Exercise as a tool for ill-health prevention	Sub-theme: Line manager pressure	Sub-theme: Social pressure	Sub-theme: No time for hobbies	Sub-theme: Hobbies used to de-stress from work
Person A						

Matrix 2

	Main theme: Health and wellbeing		Main theme: Stresses in job		Main theme: Hobbies	
	Sub-theme: Mental wellbeing	Sub-theme: Exercise as a tool for ill-health prevention	Sub-theme: Line manager pressure	Sub-theme: Social pressure	Sub-theme: No time for hobbies	Sub-theme: Hobbies used to de-stress from work
Person B						

King and Horrocks (2010) suggest a number of contexts in which to use matrix analysis. They argue that if the researcher is working with a large complex data set of more than 30 interviews, and if the study design requires comparison between organisations, the visual element of a matrix approach makes analysis of the data manageable. In addition, they argue that studies with a strong a priori focus should use matrix analysis.

They also suggest that, because matrix analysis does not require line-by-line coding, it is a resource efficient approach and suited to research projects that have limited time and personnel. The contexts King and Horrocks (2010) suggest would benefit from the utilisation of a matrix analysis fit well with the context of this research project. Whilst King and Horrocks (2010) make it clear that they do not recommend the use of a priori codes, they suggest that, if a priori codes are used, the researcher should afford themselves a degree of flexibility to modify thematic areas during the process of coding and analysis. That is why they advocate the use of framework analysis (a modification of matrix analysis) as, through a 'familiarisation' phase with the transcripts, it ensures that the thematic structure is not driven purely by a priori codes.

In a framework analysis (Ritchie et al, 2014; Smith and Firth, 2011), data are sorted both by theme and case and operationalised through the creation of a matrix which uses a hierarchy of themes (see Table

17 below). Given the arguments made by King and Horrocks (2010), I chose to use framework analysis. One of the reasons I used framework analysis was because it allowed me to balance within- and across-case analysis. This is important as within-case analysis facilitates rich in-depth contextual information, whilst cross-case analysis facilitates the emergence of relationships and associations (King and Horrocks, 2010).

Table 17 - Example of Framework Analysis

	Larger Theme			Larger theme		
	Sub-theme	Sub-theme	Sub-theme	Sub-theme	Sub-theme	Sub-theme
Case A						
Case B						
Case C						

I also chose to use framework analysis because the framework approach is more 'top-down' than template analysis; that is, there is less modification and iteration of the original codes. In addition, unlike template analysis, matrix analysis tends not to use line-by-line coding because it works across units with relatively large data sets, thereby highlighting transcript sections that most strongly address particular themes. I felt both these reasons would help reduce the time it would take me to analyse data, which was a concern of mine given the number of interviews I conducted.

Given that the original modus operandi of the framework analysis is to reduce data through synthesis and summarisation in order to make coding manageable (since putting verbatim text in cells would become quickly unworkable in a matrix format) framework analysis can be critiqued as being reductionist. To counter such criticism, proponents of framework analysis highlight that, even though text is summarised, key terms and language in the text are still retained. They also note that most forms of data analysis move away from verbatim text through the process of conceptualisation which reduces the data into concepts, themes or ideas and leaves out unnecessary data so that such

concepts can emerge (Ritchie et al, 2014). An additional characteristic of framework analysis is that, at the beginning of the process, emphasis is placed on data management rather than on analysis and deconstruction. That is, the cells are populated with raw or summarised data rather than a conceptualised form of the data, with conceptualisation and deep analysis occurring only after all the data have been managed. Typically, the time spent on data management in framework analysis decreases over time, whilst the time spent on interpretation and analysis increases over time (Ritchie et al, 2014); this occurred in my process of coding as I found that certain themes were approaching data saturation.

4.9.1 Coding framework

To ensure the effective use of framework analysis, themes should be developed that facilitate comparison across all the cases as it becomes counter-productive to develop many context-specific themes that will yield very few or no data (Ritchie et al, 2014). The themes I used were those based on the final version of my coding framework (see Table 18 below for an example).

Whilst thematic analysis is a widely adopted approach to study designs similar to that of this research project, King and Horrocks (2010) note that there is little discussion in the methodological literature about what constitutes a theme (though they highlight Bruan and Clarke's (2006) paper on thematic analysis in psychology). They therefore offer the definition of a theme as 'recurrent and distinctive features of participants' accounts, characterising particular perceptions and/or experiences, which the researcher sees as relevant to the research question' (King and Horrocks, 2010, p.150), and I used this as a basis for the process of constructing themes and coding. Such a definition is important to note because it signifies that if an issue is raised only once, no matter how powerfully, it cannot constitute a theme (though it could be included in analysis).

Whilst I outline below the processes I went through in the coding process, it should be noted that this is a somewhat idealised representation and in reality the steps were iterative and required going back

and forth between the development of codes and the review of the data. Such iteration is common in thematic analysis, and is a process that King and Horrocks (2010) suggest helps ensure the flexibility and openness necessary for thematic analysis of qualitative data.

The themes outlined in the Results chapter of this thesis were based on the Greenhalgh et al conceptual model (2004a), but the codes used for the analysis of the interview transcripts were initially based on the sub-sections to chapters in the Greenhalgh et al review (2004a). This was because the full Greenhalgh et al review offered more detail than the visually depicted conceptual model itself. Additionally, by basing the codes on the full Greenhalgh et al review, I could more readily link and cross-reference the codes to research from specific authors. This was more labour intensive than simply basing the codes and sub-codes on the conceptual model itself, but it offered advantages. For example, under 'the innovation' construct of Greenhalgh et al's visually depicted model, there are 12 total sub-constructs, but I found 26 separate issues relating to attributes of the innovation from my reading of the Greenhalgh et al review, which were used as the sub-codes to 'the innovation' in the initial coding matrix. This afforded me a richer base to make further iterations of the coding structure.

The development of my codes went through three iterations in Microsoft Excel, culminating in final codes and sub-codes. As stated above, in the coding matrix the sub-codes were developed from each individual construct I encountered in Greenhalgh et al (2004a). In further iterations, I merged sub-codes that were similar to each other so that the coding of the data was manageable. For example, in my first coding structure under the main theme 'attributes of the innovation', I identified the issues 'complexity of the innovation', 'lack of complexity', 'perceived ease of use' and 'complexity and ambiguity of the evidence' and turned them into sub-codes. Each of the sub-codes was cross-referenced to authors in the Greenhalgh et al review, thereby ensuring that the codes were evidence-based. In further iterations, I merged these sub-codes together into one sub-code: 'complexity of the innovation'. A separate column was used to note the original sub-codes so that merges could be more

easily tracked. Thematic analysis typically involves hierarchical relationships whereby themes contain sub-themes. Whilst the number of levels for sub-themes can go to five or more (King and Horrocks, 2010), for practical purposes I followed Braun and Clarke's (2006) suggestion of a two-level hierarchy. Table 18 below is an example of the final iteration of the coding table.

Each sub-code had a corresponding definition and a note on whether the definition was my own, from the literature or a mix of my own and the literature. I would only develop a definition if I could not find one in Greenhalgh et al (2004a), while the definition would be a mix of my own and from the literature if I had to change the definition to make it more applicable to the context of this project.

Table 18 - Example of final coding framework

		Attributes of the innovation that influence adoption			
Reference	Page number in Greenhalgh et al (2004)	Sub-codes	Definition of Code (with note on whether definition is my own, from the literature, or a mix)	Original name of sub-code in v1.2 (if different to v1.3)	Original from theme in v1.2
Damanpour (1991)	172	Type of innovation	Whether the respondents see the innovation as administrative or technical, product or process, radical or incremental, and their opinions on what this means/leads to (definition: Greenhalgh et al)	Administrative or technical innovation – product or process innovation – radical or incremental innovation	Attributes of the innovation that influence adoption
Denis et al (2002); Gladwin et al (2002)	136-137; 134-135	The ease by which the innovation can be defined	Whether interviewees believe the workplace guidance is easy to define (in terms of type of innovation or what it does), and the repercussions of this. Also, general discussion of the ease of defining an innovation/guidance (definition: my own)	Well-defined innovation – The innovation is difficult to define	Attributes of the innovation that influence adoption
Fitzgerald et al (2002); Dopson et al (2001); Taylor et al (1998); Aubert and Hamel (2001)	138-139; 153 & 193-194; 237; 115	Strength and quality of evidence	Whether the interviewees thought the evidence in the workplace guidance was strong or weak and the repercussions of this. Also, interviewees generally discussing strength of evidence with regards to innovation/ guidance (definition: my own)	Robustness of the scientific evidence behind the innovation – Strength of evidence – 'The strength of evidence does not drive its diffusion' – Availability of good research evidence for the change – Perception of the availability, quality and value of the information produced by the innovation	Attributes of the innovation that influence adoption

As King and Horrocks (2010) note, thematic analysis needs to balance clarity with inclusivity. If there are too many themes and an overly complex thematic structure, it becomes difficult for the reader to understand the analysis of the researcher and see how themes relate to each other. Conversely, minimising the number of themes in the name of clarity may lead to over-simplification and lack of deep analysis. Obtaining this balance was the objective for my iterative process of reducing and merging sub-codes. To enhance clarity further, I focus in the Results chapter on the themes and sub-

themes that emerged most strongly from the analysis, and have changed the titles of the sub-codes I used to correspond to the visually depicted Greenhalgh et al conceptual model (for example, by changing the code I used in the analysis from 'attributes of the innovation' to 'the innovation'). By doing this, I have been able to keep the depth and inclusivity in the analysis stage, and maintain clarity and conceptual consistency in the reporting of the analysis.

King and Horrocks (2010) argue against the use of a priori themes because they believe it leads to a 'blinkered approach to analysis' (p.168). However, I felt there was a strong advantage to having a priori themes and basing these themes on Greenhalgh et al's review: the review highlights research evidence of factors important to the diffusion of innovations in healthcare organisations. Basing my themes on research evidence allows me to add to the literature base by exploring such evidence in a different context and either corroborating the literature or bringing to light gaps in research. Additionally, I felt that basing my coding framework on evidence meets the requirements of policy makers who, as I have discovered through my own experience in policy, are more cautious about coding frameworks based solely on personal interpretation.

Logistics of coding

I coded the data using Nvivo software as it allows for the management of a large amount of data. It also has the advantage of linking the coded text back to the original interview transcript, which reduces the risk of losing the context of the data after the coding (Ritchie et al, 2014). I did the coding as and when I received the interview transcripts from the transcription service. Alternative options of coding sequence for interview transcripts would have been to code per whole case study site (i.e. code all transcripts for Trust East, then all transcripts for Trust Metropolitan, then all transcripts for Trust Midlands), or to code one transcript per case study site in turn. Both these options would have required me to wait for transcripts, and I could find no evidence that the sequence of coding transcripts influences results.

I stopped using Nvivo once I believed that data saturation was reached and began making selected and relevant notes on the transcripts themselves, in order to reduce unnecessary descriptive coding. After this stage, I began analysing the themes that emerged the most strongly, as some themes and sub-themes had little or no data. It should be noted that, whilst coding the interviews, I did not make further iterations of the coding framework. However, when I began analysing and writing my interpretation of the data, the framework began to change to the final thematic structure found in the Results chapter.

Quality assurance of the coding
Independent coding – where another researcher independently analyses transcripts in relation to the codes developed – can be used in thematic analysis as a quality check. There are two main approaches for independent coding: code-defining where coders independently code and analyse transcripts and then meet to compare and discuss codes; and code-confirming where the researcher goes through the coding process and asks an independent coder to scrutinise a sample of transcripts and corresponding codes. Additionally, there are different levels of rigour for independent coding: using the code-defining approach within the research team (it is not recommended to use code-confirming for within-team coding as external views are required to bring credibility to this approach); using a code-defining or code-confirming approach for an external independent coder; or using a code-defining or code-confirming approach with an expert panel (King and Horrocks, 2010). Inter-rater reliability can be used as a way to identify the variance in coding. However, King and Horrocks (2010) argue that independent coding should not be used to demonstrate reliability as individual interpretation would naturally shape the analytical process in some way. The authors argue that, instead, independent coding should be used to enhance reflexivity. Additionally, they argue that, whilst the size of the sample of transcripts and method of independent coding will depend on the project context, it is unlikely that independent coding of a single transcript would be sufficient. Due to project time and resource constraints, it was not possible to use independent coding as an approach to quality assurance or facilitation of reflexivity, and this is acknowledged as a limitation. However,

meetings were held with my supervisors to discuss codes and the analysis of transcripts throughout the process of coding.

Respondent feedback is sometimes used as an approach to quality assurance of coding, but I had chosen not to adopt this approach. Whilst there is an ethical argument to allow participants a voice in how they are being represented and empower them to be involved in the research, I agree with the position of King and Horrocks (2010) who argue that using participants to confirm or disconfirm coding and analysis is not tenable as it is susceptible to participants rejecting the accuracy of the analysis because it is socially undesirable or accepting the analysis even though they do not agree with the interpretation because it puts them in a more positive light. These issues are somewhat mitigated by anonymisation of transcripts and analysis, but the risk of judging analysis and interpretation based on personal preference – rather than accuracy – remains.

4.9.2 Overcoming challenges in coding

It is important to acknowledge the challenges of coding data into a priori themes based on the Greenhalgh et al constructs. The overlapping constructs of the Greenhalgh et al model, discussed in Chapter 3, was one of the main challenges I encountered when coding interview data. Gibbs (2007) argued that overlapping constructs is a common occurrence in qualitative research. Real-world data are rarely binary, but rather, are complex and messy. When dealing with such data, it is easy to run into a scenario where data can go into several constructs. Challenges in coding occur because of the interplay between the complexities of real world data, the difficulties in assigning those data when coding, and the natural interlinkages between constructs.

My coding process went through iterative steps, and this helped in making sense of overlapping data. The first step was to put interview data into all relevant codes in Nvivo. This meant that some interview data went into several codes. At this stage, it was important not to spend time interpreting the data or deliberating if they should be removed from a particular code to reduce instances of

overlap. This is because it allowed for quicker processing and management of data, and mitigated the risk of bringing conceptual ideas in too early. At first this seemed counter-intuitive because it created a larger dataset, but it meant I did not get stuck on deciding which one or two codes best fit the data, leading to a more free-flowing data management process based on initial first impressions. This process also allowed me to re-familiarise myself with the interviews.

For the next step, I re-read the raw and summarised data that populated the coding framework and began the process of interpretation. This was an iterative progression from the first step, meaning that as the process of data management decreased, the process of interpretation increased; but data management and interpretation occurred to varying degrees throughout both steps.

As I began focusing on interpretation, themes started to emerge. It was at this point that I asked questions of the data, exploring issues such as how interviewees perceived the NICE workplace guidance, whether the guidance had impact on Trust policy, or how the guidance was compared to other similar innovations. As I was interpreting and investigating, I focused more on the issue of overlapping themes. This is when the limitations in terms of the operationalisation of the Greenhalgh et al model materialised. For example, some data went into both 'dedicated time/resources' and 'slack resources' codes. The difference between the two is that slack resources can be defined as resources beyond what is needed to maintain standard services, whereas 'dedicated time/resources' can be defined as resources dedicated specifically to the implementation of the particular innovation. Whilst at face-value this granularity is a strength of the Greenhalgh et al model, in reality there was often little to separate the two codes when dealing with my interview data. With this example I ultimately decided that 'slack resources' was a stronger emerging theme because on the whole interviewees spoke about resources in more general terms, rather than discussing the resource hypothecation for the implementation of the NICE workplace guidance. Where possible, I aimed to reduce instances of overlap, particularly if one theme was not strong or the overall analysis would not be enhanced by its inclusion. However, this was not always desirable, and there were instances where

I kept data that were in multiple codes. For example, interviewees often discussed the clarity of the NICE workplace guidance in terms of language and presentation. I put this data in both the 'innovation' theme and the 'communication' theme, because these data were equally important to both themes. To improve the flow of the narrative on final write up, I did not include repeating quotes, deciding instead to use different quotes that would be equally illustrative.

In drafting the narrative, I provided several quotes from the interview data for each point and interpretation I made. This draft narrative was taken to my PhD supervisors, who would check whether the data I highlighted were an accurate reflection of the theme. Any queries or issues were discussed, and I provided a further iteration of the narrative and findings.

MacFarlane and O'Reilly-de Braun (2011) noted the importance – and difficulties – of understanding the constructs of a model that is being utilised, arguing that misunderstanding the original conceptualisation and meaning of constructs would mean that analysis would not correspond with the model being used and negate the reason for the model being used in the first place (MacFarlane and O'Reilly-de Braun, 2011). In some instances, I felt that data did not entirely fit the definition of a construct. In this case, rather than creating new constructs, I noted this discrepancy and included it in my discussion. However, I cannot be sure that the definitions I used for some of the constructs were what was intended by the model (since Greenhalgh et al were not always clear or explicit in the definition of some of the constructs). Additionally, I cannot be sure that my understanding of the constructs was the same as what the model intended, nor that my coding of data into the constructs accurately reflected what the model intended. As I discussed in section 3.6.3, these questions would have benefited from a discussion with one of my supervisors and co-authors of the Greenhalgh et al review (2004a), and is a limitation that is acknowledged.

McEvoy et al (2014) argued that, whilst it is important to have stability of constructs in order to operationalise a model, it is perhaps equally important that, irrespective of where data fit within a model, the model is used to help raise important issues. The authors also argued that challenges with

coding data into a priori themes signify that the conceptual model is being utilised as a heuristic device for critical analysis, rather than as a 'conceptual straitjacket'. The challenges and limitations I have discussed in this section suggest that models and a priori coding need to be used flexibly when dealing with complex real-world data, and that 'models should be viewed as living documents, or works in progress, not as static entities' (Tabak et al, 2012, p.7).

4.10 Conclusion

This chapter has highlighted the methods employed in exploring the diffusion of NICE workplace guidance. The exploratory nature of the research, and its focus on processes and complex contexts, necessitated using qualitative research methods. A total of 62 face-to-face semi-structured interviews in three NHS acute Trusts and NICE were conducted. The Trusts were chosen from an anonymised stratified sample of the RCP (2011) audit and the interview participants were chosen using non-randomised purposive sampling based on inclusion criteria relevant to the research objectives. Data were analysed using framework analysis – a version of thematic analysis which allows the use of a priori themes and facilitates the comparison of data both within and across cases. The themes were developed based on the Greenhalgh et al review.

Whilst project resource constraints limited some of the quality-control tools that could be employed for the methods, there was a strong focus on maintaining applicability both for policy makers and in terms of the project's value to the Greenhalgh et al diffusion of innovation conceptual framework. Yin's (2014) quality criteria tests for study designs were on the whole met. The following chapter describes the results of the data gathering and coding processes.

5. Results

5.1 Introduction

In this chapter I present the main findings from my interviews with 57 members of staff in three NHS acute Trusts and with five staff members at NICE. I divide the findings thematically, based on the Greenhalgh et al (2004a) conceptual model. As can be seen from Figure 4, the model has a number of components. The themes I highlight in this chapter are the most predominant themes that emerged from the interviews. There are eight themes in total:

Theme one describes the structure of the three NHS Trusts as well as their 'slack' resources.

Theme two describes the outer context and is split into two components: first, the issue of the incentives given to implement innovations, and second the issue of sanctions and mandates that deter lack of implementation.

Theme three describes the perception of the interviewees with regard to the workplace guidance as an innovation. It highlights issues such as complexity, compatibility, task usefulness and relative advantage of the guidance.

Theme four describes the link between the innovator (NICE) and those meant to implement the innovation (the Trusts). NICE's credibility amongst interviewees is described – both as an organisation and with regard to workplace HWB, as well as the product augmentation, which is the external support that is given to help organisations implement an innovation more effectively.

Theme five describes the fit between the NICE workplace guidance and the Trusts' respective goals and priorities. It also describes the resource hypothecation dedicated to staff HWB by the three Trusts.

Theme six describes the adoption of the NICE workplace guidance by the three Trusts. This is centred on the initial knowledge and awareness of the NICE workplace guidance within the Trusts and the formal processes of implementation.

Theme seven describes the communication of the NICE guidance, focusing on the interviewees' perceptions of the marketing of the NICE guidance as a document, as well as informal dissemination of the NICE workplace guidance within the three Trusts.

In the final part of this chapter I present the results of interviews with five staff members from NICE. I conducted these interviews after the NHS staff interviews, aiming to supplement my informal meetings with members from NICE and explore issues emerging from the interviews with the staff from the NHS Trusts.

5.2 Theme 1: the inner context (system antecedents)

The inner context is the channel(s) through which an innovation must pass if it is going to be spread and sustained. These channels can include organisational structures as well as 'softer' mediums such as organisational culture and ways of working (Greenhalgh et al, 2004a). System antecedents are the background attributes of an organisation or system which form the organisational context in which the innovation is implemented. These include structure and slack resources (see Table 19 below), as well as other factors not highlighted in this project, such as leadership and vision, good managerial relations and risk-taking climate (Greenhalgh et al, 2004a). The findings in this section refer to organisational structures.

I am defining structure as the physical and administrative characteristics of an organisation, such as personnel numbers or physical coverage, or the extent of decentralisation in terms of autonomy of decision making. The findings from the structure sub-theme, which focuses on the Trusts' HWB structure (that is to say, the physical and administrative characteristics in relation to staff HWB within the organisation), emerged from both the formal interviews and informal discussions with key

members of staff at the respective Trusts. Generally, discussions of structure were not in reference to the NICE guidance, but this sub-theme was included because it provides the context which the NICE guidance had to pass through.

The sub-theme of slack resources came out very strongly in the interviews. Slack resources are the 'resources an organisation has beyond what it minimally requires to maintain operations' (Greenhalgh, 2004a, p.171). Greenhalgh et al include 'slack resources' within the definition of 'structure' in their system antecedents component of their conceptual model. However, I make it a separate sub-theme here as it came out more strongly than the other components of structure.

Table 19 - Definitions of sub-themes emerging from the 'the inner context (system antecedents)' theme

Theme	Sub-themes	Definitions
The inner context (system antecedents)	Structure	The physical and administrative characteristics of an organisation
	Slack resources	The resources the Trusts have beyond what they need to maintain standard services

5.2.1 Sub-theme: structure

(i) Trust East's HWB structure:
The HWB structure of Trust East is shown in Figure 6 below. The Human Resources (HR) Director in Trust East:

- is a Board member

- is the executive and strategic lead for staff HWB

- has responsibility for fundraising

- has executive responsibility for the Occupational Health (OH) department

- is the line manager for the OH Manager

- has strategic responsibility for sustainability, active travel and car parking.

The HR Director in Trust East appeared to take the strongest ownership in terms of staff HWB when compared to the HR Directors in the other two Trusts. Whilst the other HR Directors delegate all but executive responsibilities for staff HWB, the HR Director in Trust East presents information about staff HWB in Board meetings and works closely with the OH Manager to set out the HWB strategy and policies for the Trust and to draw up an annual action plan which delivers the HWB strategy. The HR Director and OH Manager are supported by an HWB Coordinator, who acts as the link between management and front-line and administrative staff. The HWB Coordinator's responsibilities are split evenly between HWB and fundraising. The role of the HWB Coordinator is funded by the Trust's Charitable Fund.[8]

The HR Director chairs the HWB Steering Group, which consists of:

- HR Director

- OH Manager

- the Trust's five elected staff governors

- Travel Plan Coordinator

- HWB Coordinator.

The HWB Steering Group develops staff HWB policies for the Trust and monitors overall staff HWB data, such as sickness absence and stress surveys. It is a formal group in the Trust and links with the Health and Safety Group. Through the HR Director, the HWB Steering Group has a direct reporting line to the Trust's Board, which was not the case in the other two Trusts (although Trust Metropolitan recently launched a Sustainable Development Committee at the time of the interviews).

In contrast to the HWB Steering Group, the HWB Forum is an informal group of employees who meet to discuss HWB issues in the Trust and to develop HWB ideas. The HWB Forum is small, with members

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[8] A Foundation that acts as the charitable arm of the Trust, which is subject to rules governing charities and can raise money for patient and staff issues.

taking part in meetings on a voluntary basis throughout the year, usually during their lunch breaks and without the participation of managers and senior figures in the Trust. It concentrates on practical ideas generated from experience and personal knowledge, rather than a review of evidence or policy documents. This may partly explain why the HWB Coordinator, who chairs the HWB Forum and who saw the NICE guidance as a policy document, did not use HWB Forum meetings to discuss the NICE workplace guidance.

The HWB Forum is made up of junior administrative and front-line staff, and between 6 and 14 people attend per meeting. The meetings take place once every three months. The HWB Forum does not include the HR Director or the OH Manager. The HWB Coordinator consults the HWB Forum throughout the year for ideas on how to improve staff HWB in the Trust, particularly with regard to staff morale. These are then relayed by the HWB Coordinator to the HWB Steering Group.

Human Resources Director

-Executive responsibility for sickness absence in the Trust

-Sets the HWB strategy for the Trust in collaboration with the OH Manager

-Sets the HWB policies for the Trust in collaboration with the OH Manager

-Owner of the NICE workplace guidance

OH Manager

-Sets the HWB strategy for the Trust in collaboration with the HR Director

-Sets the HWB policies for the Trust in collaboration with the HR Director

Travel Plan Coordinator

-Coordinates cycle-to-work and other travel initiatives along with the travel plan

-Sits on the HWB groups to make links with active travel

Charitable Funds Committee

-Funds HWB initiatives and other staff, Trust and patient-related initiatives

-HWB Coordinator funded through this committee

-Members include two non-executive Directors, the Director of Resources and the HR Director

Health and Wellbeing Coordinator

-Role established in 2011

-Duties split 50/50 between fundraising and HWB

-Seeks funding for HWB initiatives from HR Director and OH Manager

-Does not deal with policy

Health and Wellbeing Steering Group

-Members are the OH Manager and the elected staff governors

-Develop HWB policies and documents

-Analyse staff HWB in the Trust

Health and Wellbeing Forum

-Chaired by the HWB Coordinator

-Participation is voluntary

-Develop ideas for HWB events and initiatives

Figure 6 - Organisational relationship chart for Trust East

(ii) Trust Metropolitan's HWB structure:

The HWB structure of Trust Metropolitan is shown in Figure 7 below. The Trust is currently split into six Clinical Programme Groups (CPGs), one Corporate Directorate and one Directorate for Public Health and Primary Care. The Corporate Directorate oversees services such as HR. The Directorate for Public Health and Primary Care oversees the public health interventions across all Trust functions, including the Corporate Directorate and the six CPGs. The CPGs oversee clinical practices, such as surgery and medicine. This structure has been subject to a number of changes over the last 10 years, such as changing the number of CPGs or moving departments to different CPGs. It was not possible to ascertain from the interviewees what exact changes occurred and when they occurred, though the overarching structure has remained largely the same since the Trust's merger with neighbouring hospitals.

The Occupational Health (OH) department falls under the HR Director's executive responsibilities in the Corporate Directorate. However, it shares functional duties with the interventional Public Health Directorate, thereby straddling both Directorates in the Trust. The OH Department has close working relationships with several other departments including HR, Public Health, Estates and Facilities, and clinical specialities closely tied with occupational medicine (such as rehabilitation). It does not have any involvement with health and safety other than an arms-length relationship. The Director of the OH Department in this Trust is a senior national figure in OH and has in-depth knowledge of NICE workplace guidance and its guideline development process. His role at the Trust is to pull together an overarching and coordinated approach to staff health and wellbeing (HWB), working with other relevant departments in the organisation, such as the Directorate for Public Health and Primary Care or Estates and Facilities departments.

The Director of OH has managerial responsibility for the Trust's Staff Counselling Service, meaning that the Counselling Service is also part of the HR Department. Although mainly delivering treatment and

prevention services to staff, such as providing a bullying helpline, the Counselling Service also publishes self-help leaflets, organises HWB events and runs training courses for stress management. The Head of the Staff Counselling Service is part of the Health Promoting Hospitals (HPH) group, which is a Trust group that takes part in the HPH international network run by the World Health Organisation's to encourage hospitals to promote public and workplace health practices. Other members of the HPH group include the Public Health Programme Manager, the Performance Manager for Estates and Facilities departments and various other staff in the Trust with interests or responsibilities to promote HWB. No interviewee recollected discussing the NICE workplace guidance in this group.

The HPH group was jointly set up by a public health consultant in the Trust (who is also Chair of the group) and the Director of OH. Its main function is the promotion of HWB to patients, staff and the wider community. Its staff HWB function resulted in the OH department and the Directorate for Public Health and Primary Care forging close yet informal working links on staff HWB issues such as smoking cessation and obesity. The HPH group has recently become a sub-group of the wider Sustainable Development Committee (SDC). Prior to becoming an SDC sub-group, the HPH group met on an ad hoc basis, the meetings taking place two to three times a year. There was a lull in the year prior to the group joining the SDC, as the Director of OH and the public health consultant – the drivers of the HPH group – had other commitments. Until becoming a sub-group of SDC, the HPH group was more of an informal group with no defined reporting structure. As a sub-group of SDC it now reports up via the Chair of the HPH group. The SDC is the most holistic committee of all those dealing with HWB in the three Trusts in that it covers a broad spectrum of HWB issues, although the smaller size and flatter hierarchy of the other two Trusts mean that their HWB groups have a more direct route to the Trusts' respective Boards, particularly in the case of Trust East.

The SDC is characterised by a number of sub-groups ranging from staff HWB to the environment to wider community outreach (see Figure 8 below). It was established in 2012 under the model provided

by the Global Corporate Challenge[9] programme. Whilst these groups were in existence in some form prior to the SDC, there was never any direct mechanism connecting it to the Board. In contrast, the SDC is chaired by one of the Non-Executive Directors of the Trust's Board. The intention of this is to give a measure of formality and clout to the SDC and its sub-groups, both by having a direct line of accountability to the Board and by reporting to the Governance Committee.

In addition to the SDC and the HPH group, the Trust also has a group called the Staff Experience Board. The Staff Experience Board was formed in 2010 and meets four times a year. It has a wider remit than staff HWB, looking at other issues in the organisation that affect staff, such as various Trust policies or staff survey results. Nevertheless, staff HWB does get discussed, particularly with regard to issues such as stress and flexible working. However, there was no recollection from interviewees that the NICE workplace guidance was mentioned in this Staff Experience Board, or that it influenced discussions. The Staff Experience Board is an open group with the aim of getting a wide representation of staff throughout the organisation and anybody from any staff position can join. However, with almost 10,000 staff members, questions may be raised as to the representativeness of such a relatively small group. It is chaired by the HR Director and its membership comprises:

- Trade union representatives

- Assistant HR Director

- Director of OH

- Head of the Staff Counselling service

- Public health consultant

- Staff representatives

- Other managerial and clinical staff from different staff grades.

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[9] The Global Corporate Challenge (2015) is an international workplace health and wellbeing initiative in which organisations compete against each other, with employees collectively walking distances to see who walks the furthest (https://www.gettheworldmoving.com/).

The Staff Experience Board reports up to the Trust's Management Board[10] via the HR Director. It reports down throughout the organisation via minutes, briefs and advertisements in the Trust's intranet, as well as members of the Board circulating notes to their colleagues.

Figure 7 - Organisational relationship chart for Trust Metropolitan
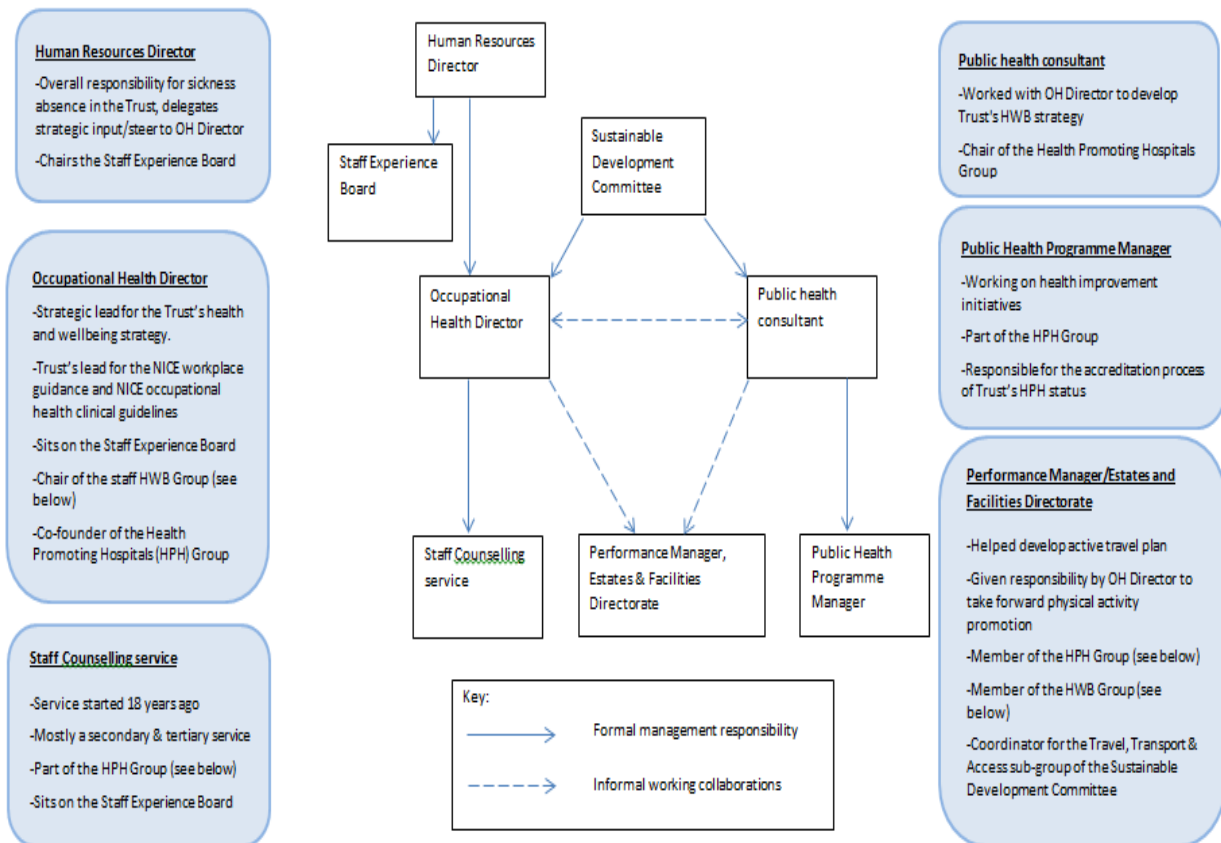
[10] The Management Board is a sub-group of the Executive Board which is the highest committee in the Trust.
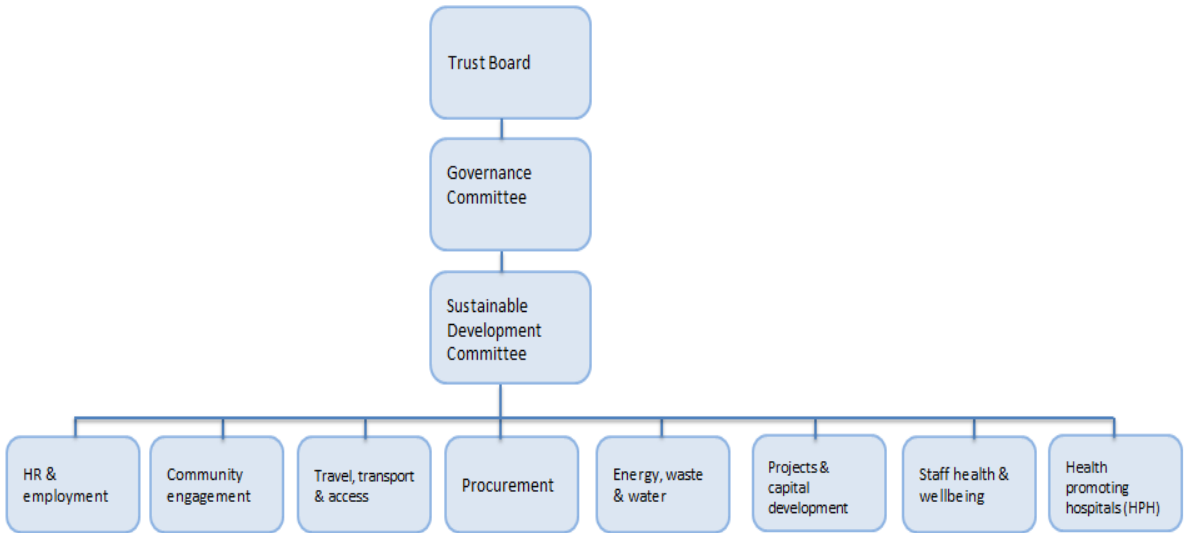
Figure 8 - Sustainable Development Committee reporting structure

(iii) Trust Midland's HWB structure:

The HR Director in this Trust is a Board member and is the executive lead for HWB. However, the HR Director delegates leadership and ownership to the Assistant HR Director. The ownership of staff HWB by the HR Director and Assistant HR Director means that staff HWB has a presence both on the Board and in high-level committees. As with Trust East, it means that staff HWB has a more direct route to the Board than at Trust Metropolitan. The Assistant HR Director sits on the Operational Executive Group (OEG) which deals with issues at an operational level (for example, the Trust's stress management policy). The Trust is split into five Directorates, and all five senior Directorate Managers and senior Heads of departments (such as the Deputy Director of Nursing) sit on this group and are expected to disseminate the meeting notes down to their respective departmental-level meetings. As Figure 9 shows, the OEG sits below the Management Executive Group, which itself is a sub-group of the Board. The OEG has executive responsibility for all NICE guidance. However, interviewees did not recollect or mention that the NICE workplace guidance was discussed here.

The HR Director and Assistant HR Director are also members of the Senior Management Forum. The Senior Management Forum sits outside the structure of the Management Executive Group, the OEG and the Directorate meetings. The Senior Management Forum is larger than the OEG and is a setting in which senior managers share best practice and discuss what is happening at the Trust level. Staff HWB has been discussed in this forum as part of other initiatives (such as stress management), although there was no recollection from interviewees that NICE workplace guidance was discussed here. The Senior Management Forum is also attended by the Chief Executive.

The Assistant HR Director also chairs the Health, Safety and Wellbeing Committee. The Committee is comprised of the OH Manager, other departmental managers and senior clinical staff, although anyone is allowed to attend. The attendance at committee meetings fluctuates, ranging from between five to 15 people at the meetings. When the group first started it had quarterly meetings,

although in the last three years they have fallen to about two meetings per year. The Health, Safety and Wellbeing Committee is a sub-group of the Quality and Risk Committee, which is itself a sub-committee of the Board. The issues that are discussed at the Health, Safety and Wellbeing Committee include reports of high incidences of stress. The Health, Safety and Wellbeing Committee may refer a report up to the Quality and Risk Committee if they believe it requires board-level attention. Interviewees did not recollect or mention that the NICE workplace guidance was discussed in this Committee.

As well as having a Health, Safety and Wellbeing Committee, the Trust has an HWB working group. This group was established in 2010 and is run on a voluntary participation basis similarly to the HWB group in Trust East. This means that Trust Metropolitan is the only of the three Trusts that does not have a staff-led HWB group. The HWB group in Trust Midlands is also open to anyone who is interested, and is mainly attended by junior and administrative staff. Members include the Trust's canteen manager, physiotherapist and dietician. The OH Manager also sits on this group. It was established to share and develop ideas on staff HWB initiatives. The meetings are informal and ad hoc, and minutes are not taken. The HWB group is on average attended by fewer than 10 people. The group rarely discusses formal policy or guidance documents, and the NICE workplace guidance has not been discussed.

The OH department in this Trust has fewer capital and human resources than those in the other two Trusts in this project. However, it should also be noted that this Trust has fewer capital and human resources overall compared to the other two Trusts. The OH department is run by the OH Manager who also acts as a back-care advisor. The department sits under HR. The OH Manager stated that the OH department was, until recently, under resourced – even for the relatively small size of the Trust:

OH Manager, Trust Midlands

We haven't had the capacity within the department ... and we're only just beginning to get our resources where we should have them, from a staffing point of view, and getting staff trained.

Since 2012 the OH department invested in training for its OH staff and employed a new member of staff. Whilst the OH departments in the other two Trusts lead on preventative staff HWB initiatives, this is the responsibility of the HR department in this Trust. The scope of responsibilities for the OH department in this Trust is limited to undertaking non-complex occupational health tasks:

OH Manager, Trust Midlands

We are very much seen as: staff come in, you do the health checks, you give them a few jabs, when it all goes wrong in the workplace, we're there to support them again. Historically within this Trust, we've not had a proactive role.

Nevertheless, since 2012 the HR and OH departments have worked more closely together. The Trust has weekly HR advisor meetings, and every month the HR advisor meetings include OH staff. These meetings discuss issues such as reducing sickness absence and staff turnover.
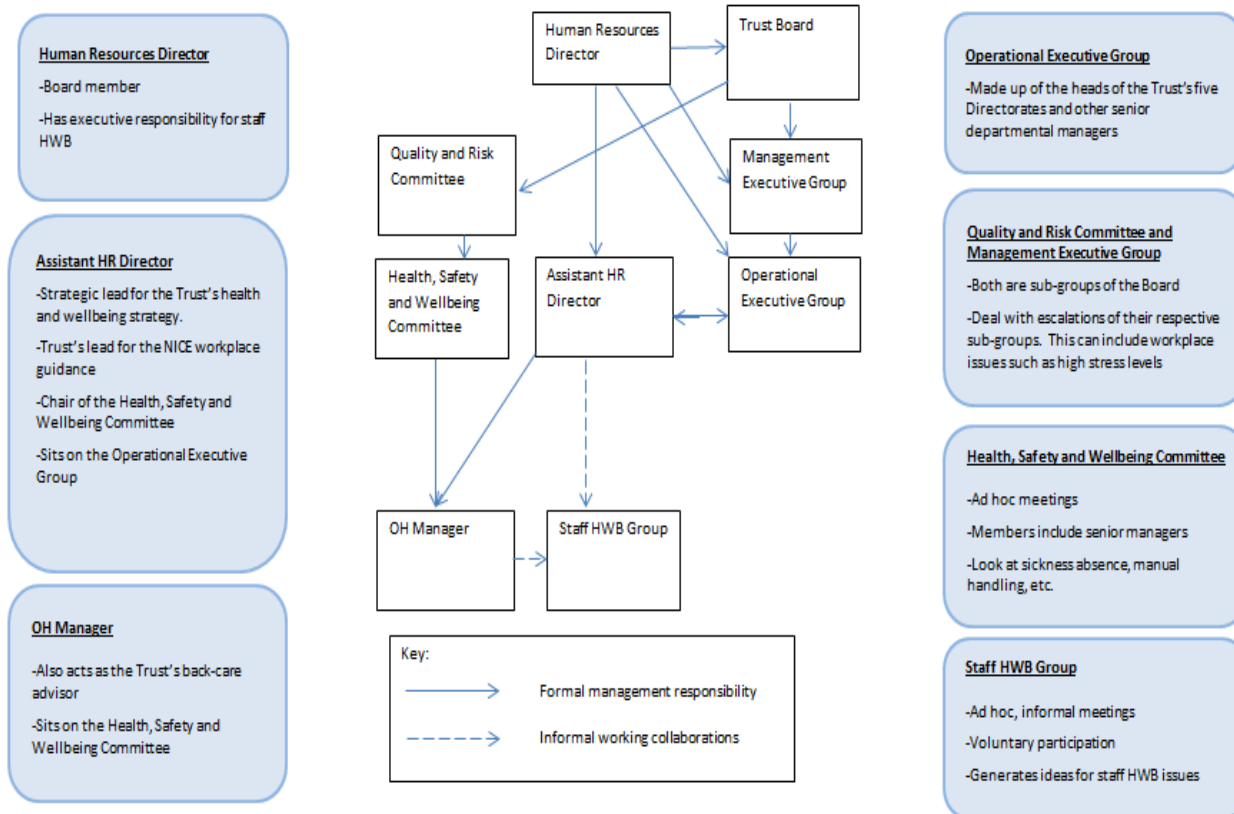
Figure 9 - Organisational relationship chart in Trust Midlands

5.2.2 Sub-theme: slack resources

The three Trusts were in different financial situations and had different financial pressures from one another, though none was particularly unique when compared to other NHS Trusts. Despite these financial differences, the quotes below are indicative of the view across all three Trusts:

> Lead Nurse for Practice Development, Trust Metropolitan
>
> *I think people are feeling very much the cost pressures in the last 18 months, I mean it's not unusual to hear of 20%/30% being wiped off budgets as a current cost saving and people are just very focused on that. I think when you're focused on trying to maintain a high standard of service in the face of quite significant cuts and resources it's then quite difficult, even though you know it's the right thing to do, to on top of that say 'Now we've actually got to innovate as well...'. It's finding the time and motivation to be able to do that I think.*

OH Manager, Trust Midlands

I think, again, what we'll come up with, obviously, resources, money, it has to be done on a shoestring, there's not a nice big pot of gold at the end of the rainbow that we can say well actually we can buy this, this and this and we could do a really fantastic campaign. So you have to work within your means.

Though NICE recommendations are designed to be cost-effective, implementing the guidance was nevertheless seen by interviewees as unrealistic in the context of the financial situation the Trusts were facing. This suggests that, because the guidance did not position itself within the context experienced by NHS Trusts, it was not seen as practical, despite being potentially cost-effective in isolation.

Lack of time was also frequently mentioned by interviewees as a particular issue in the NHS and their respective Trusts that is hindering the implementation of innovation. For example, respondents stated that this time pressure was a barrier to reading the NICE guidance:

Departmental Manager, Trust Midlands

I have a look at a couple of these documents going, yeah I am aware of the smoking and NICE guidance about obesity and the various health and wellbeing, however, I have not read those documents in great detail. I just do not have the time with everything else I have got and all the other documents we have got to read and the amount of work that is thrown in. I think that every manager will probably say the same thing; they have got so much to do.

5.3 Theme 2: outer context

The 'outer context' describes the determinants of innovativeness that are outside the 'organisation' as a construct. The outer context forms a major part of the Greenhalgh et al (2004a) contextual framework, and encompasses the socio-political climate, inter-organisational norms and values, inter-organisational collaboration and environmental stability. However, the sub-themes incentives and

mandates (see Table 20 below), which are not clearly defined in Greenhalgh et al (2004a), came out particularly strongly in the interviews I conducted. For the purposes of this project I define an incentive as a stimulus that encourages or motivates an actor (for example, an individual or organisation) to do or not do a certain action. I define a mandate as an order or policy that emerges from an official or authoritative power that requires an actor to do or not do something.

This theme describes the role of external incentives and mandates in influencing Trust priorities and the implementation of innovation. This theme was particularly emphasised in the interviews, with the overall perception being exemplified by the following statement:

> Clinical Governance Manager, Trust Midlands
>
> *If it's not mandatory and it can't be measured, you could argue, 'What is the point?' Because you can just bin it.*

Table 20 - Definitions of sub-themes emerging from the 'outer context' theme

Theme	Sub-themes	Definitions
Outer context	Incentives	Something that encourages a particular action
	Mandates	An order or policy that requires a particular action

5.3.1 Sub-theme: incentives

A number of staff HWB initiatives and policies that were implemented by the three Trusts had strong links to external incentives. For example, Trust East sought to win an award offered by a local organisation for Trusts with the best HWB initiatives, while Trust Metropolitan was influenced and attracted by entering the Good Corporate Citizenship awards. The effect of an award in motivating an organisation to implement an innovation is exemplified by an interviewee from Trust Midlands:

Assistant HR Director, Trust Midlands

We wanted to be the first, or at least among the first to get the health and wellbeing good practice [award]*, we wanted to be in there showing that we can do this stuff and we're doing it very well. So we put a lot of effort into getting it right.*

As well as awards, 'accredited status' was a motivation for the three Trusts to implement staff HWB innovations.[11]   However, not all the Trusts actively sought opportunities to get accredited.   Trust Metropolitan applied for accredited status after an external organisation publicised the opportunity:

Public Health Programme Manager, Trust Metropolitan

We received documentation asking us to see if we're interested in applying for this accreditation and we went for it.

The influence working towards an award, accreditation or similar recognition can have on the implementation of an innovation is described by interviewees:

Public Health Programme Manager, Trust Metropolitan

I don't think it matters whereabouts you are in terms of implementation. It either gives you something very little to work for to get accreditation or it might make you think oh, I've got a hell of a lot of work to do, but we know what we've got to achieve in order to get accredited, let's go for it.

Deputy Chief Nurse, Trust East

I think some of the other awards that we've gained, the fact that you gain an award and so you therefore assess yourself against your criteria are quite useful. It lends itself in some ways to implementation better.

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[11] 'Accredited status' is the status received from SEQOHS (2015), which is an accreditation system from the Faculty of Occupational Medicine.   The Royal College of Physicians runs the system, and audits participating Trusts. Trusts that pass various quality standards receive this 'accredited' status (https://www.seqohs.org/).

It is important to note that NICE also has awards – known as the Shared Learning Awards and linked to a database of user submitted case studies (NICE, 2015l). The Shared Learning Awards honour Trusts who have shown the best examples of practical implementation of NICE guidance. The shortlisted candidates and the award winners are given free conference tickets, the opportunity to present their entry at the NICE annual conference and a small trophy. However, none of the interviewees in the three Trusts appeared to know about this award, and considered the guidance required more incentive in order for it to be implemented:

Public Health Programme Manager, Trust Metropolitan

Where I think that NICE could benefit or have their recommendations put in place more, is by offering an incentive and a final goal to achieve, rather than just saying we recommend you do this, but if you get audited you might pass. I don't feel like there's enough reward for implementers to necessarily take forward those processes.

Deputy Chief Nurse, Trust East

With NICE there is that feeling that there is this requirement for us to demonstrate that we've implemented it but there's no recognition of that for the Trust once we've implemented it.

Awards and accreditation status were not the only incentives that influenced Trusts' implementation of staff HWB innovations. A number of interviewees stated that having a higher NHS Litigation Authority (NHSLA) level could save their Trust a significant amount of money in terms of insurance costs[12]. This provided the incentive for Trusts to place emphasis on the areas needed to meet NHSLA requirements. For example:

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[12] NHS Litigation Authority (http://www.nhsla.com) provides its NHS member organisations indemnity cover for negligence and legal claims made against them. Linked to this is its risk management system, which has different levels members can obtain in order to reduce the cost of their indemnity cover.

Head of Staff Counselling service, Trust Metropolitan

Because we've had to become NHSLA compliant we have increased the amount of stress assessment or stress risk assessments over the past two years dramatically, which is good.

The NHSLA was discussed a number of times by interviewees, and covered three sub-themes. Getting and maintaining the highest possible NHSLA level was a priority for all three Trusts due to the cost-saving opportunities. This was covered in the 'goals and priorities' sub-theme. However, because NHSLA insurance has different levels that can be obtained, moving up each level also acts as an incentive (therefore covering the 'incentive' sub-theme). It is also a mandate for all Trusts to have at least the most basic level of NHSLA insurance (thereby meeting the 'mandate' sub-theme below). The NICE workplace guidance was not identified by interviewees in any of the Trusts as meeting these three sub-themes.

5.3.2 Sub-theme: mandates

Not every innovation mentioned by interviewees had incentives and awards attached to them – some innovations were connected to sanctions and mandates. Innovations that had sanctions and mandates linked to them were given priority amongst the Trusts, whilst those that did not were moved down the priority list:

CEA Manager, Trust East

Because it's [the NICE workplace guidance] *not mandatory, it doesn't add as much weight as it could do or as much value as it could do. It can be taken into consideration and it's a framework to which we can use as an organisation to work to, but in order to add the most value it could, it would need to be mandatory.*

AB *Why would it need to be mandatory?*

Well because an NHS Trust in the current climate has an awful lot of competing priorities for resource, and an awful lot of competing priorities to achieve with a finite amount of resource both workforce and financial. And the priorities always sit with high profile mandatory elements first, i.e. if we're going to be externally assessed, if we're going to be monitored,

if we're going to be fined, those elements in an organisation for competing priorities always take priority.

OH Director, Trust Metropolitan

The sad reality in the National Health Service is that we're so short-termism, and essentially if it's not going to cause you pain, it tends to get overlooked… Because we have so many targets to meet that you focus your attention on the ones if you don't meet them you're going to get into trouble in some way.

The perception that the NICE workplace guidance had neither sanctions nor mandates attached to them meant that their implementation was seen as non-urgent and was therefore de-prioritised:

Departmental Manager, Trust Midlands

One of the problems the NICE guidance have is 'guidance'. People look at guidance in different ways. They think it would be something that would be nice to do, it's something well we don't have to bother with that, do we, because it's only guidance.

OH Director, Trust Metropolitan

The Estates Department could well have implemented that [the NICE workplace guidance]*…The reason that they haven't done it everywhere is that there are competing resources and they're not going to get into trouble for not doing it. You know, why would the Estates Department worry about not complying with a NICE public health guideline?*

Rather than having perceived incentives or sanctions attached to them, senior manager interviewees reiterated the desire to have quantifiable cost-benefit estimates. This highlights the link between incentives, sanctions and the previous sub-theme 'compatibility (senior managers)':

Assistant HR Director, Trust Midlands

We're not breaching any health and safety regulations but what you're asking us to do is perhaps to go over and above what's required and in order to do that I think there's got to be a really sound reason, a measurable reason.

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The lack of sanctions attached to the NICE workplace guidance can be contrasted with the obligatory nature of similar innovations. Hitherto, national workplace guidance has been dominated by the Health and Safety Executive (HSE) guidelines, some of which are mandatory. A number of interviewees mentioned that their Trust followed the HSE stress management standards:

> Clinical Governance Manager, Trust Midlands
>
> *The HSE obviously is mandatory and you can actually be fined if you don't comply with the stress standard. So that is a big driver and to have an improvement notice and that kind of thing, that reduces your credibility as an organisation.*

5.4 Theme 3: the innovation

This overall theme describes the opinions of the interviewees in relation to the NICE workplace guidance as an innovation. One respondent exemplified the importance interviewees placed on the attributes of the innovation:

> Clinical Audit and Effectiveness Manager, Trust Midlands
>
> *Everyone has a formal process in place for NICE guidance, it's not about the process, it's about what you're given at the beginning – which is your guidance – as to what your outcome is going to be.*

This theme had five sub-themes, outlined in Table 21 below. Most of the definitions of the sub-themes were taken from Greenhalgh et al (2004a), who either defined them directly, or discussed them as components of their model. Rather than assuming them to be definitive, Greenhalgh et al's purpose in defining the sub-themes was to clarify a scope to facilitate coding.

Greenhalgh et al (2004a) define complexity as the extent to which an intended innovation is perceived as clear and easy to use amongst its key target audience (Greenhalgh et al, 2004a). Compatibility describes the congruency of an innovation 'with the values, norms and perceived needs of intended

adopters' (Greenhalgh et al, 2004a, p.12) whilst task usefulness describes the additional value an innovation brings to a specified task – for example, in facilitating function or augmenting output (Greenhalgh et al, 2004a). Finally, Greenhalgh et al (2004a) define relative advantage as the effectiveness or cost-effectiveness a user perceives an innovation as having, in comparison to other innovations or the status quo.

Table 21 - Definitions of sub-themes emerging from the innovation theme

Theme	Sub-themes	Definitions
The innovation	Complexity	Clarity (or lack of) and extent of difficulty in the use of the innovation
	Compatibility	Compatibility of the innovation with the needs of adopters
	Task usefulness	The extent to which the innovation is perceived to contribute to task performance
	Relative advantage	Degree to which the innovation is perceived to be better than other similar innovations

5.4.1 Sub-theme: complexity

Clarity of documents appeared to be an important consideration for interviewees. The perception from the interviewees that worked directly with the NICE workplace guidance was that it was 'waffly' with 'a lot of repetition' (HWB Coordinator, Trust East). This perception was evident in all three Trusts at all seniority levels. This is interesting because it indicates that the guidance is being accepted neither by junior nor senior staff, even though the guidance highlights that it should be of interest to a wide-ranging audience.

The perception of complexity towards the guidance as a whole document was also extended to the recommendations contained in the guidance:

Clinical Effectiveness and Audit (CEA) Manager, Trust Midlands

I think the guidance is quite woolly, particularly for the workplace … I think the clinical guidelines are much easier because you've got measurable standards in there.

The importance of the link between the clarity of the NICE guidance and its implementation was described by one interviewee:

Assistant HR Director, Trust Midlands

If you want something to be implemented it needs to be a little bit easier to extract … it took a lot to extract what it is that we at [Trust Midlands] could do.

It was evident that those working with the NICE guidance wanted NICE to both describe a clear path to implementation and define clear measurement outcomes:

HWB Coordinator, Trust East

Sometimes the NICE guidelines can be a bit, erm, what's the word? … you just sort of read them … and I understand what they're saying but what do I do with that, where do I go?

The above quotes show that, for the interviewees, clarity is not only an issue of how the content of the guidance is written, but of what the guidance expects from its audience and a description of how to get there. It should be noted that NICE attempt to provide a degree of flexibility to their recommendations in order to accommodate different organisations:

CEA Manager, Trust Midlands

Whenever I've been to any groups and NICE have been there, they [NICE] will always say it's about what you as a Trust are doing individually and you can interpret the recommendations, you know you can do as you wish,

and it's about that gap analysis and what you would like to do as an organisation.

Whilst respondents believed that greater clarity was needed in the NICE workplace guidance, these calls were counterbalanced by calls from the private sector for greater flexibility. Examples of such comments can be found in the stakeholder consultation document for the physical activity guidance. For example, BT Group plc commented that 'the separation out of employers, HR Directors, senior managers, etc. displays a fundamental misunderstanding of business structures. The term "employer" is all encompassing and the attribution of responsibilities within any organisation is an internal matter which it is inappropriate for this sort of guidance to comment upon.' (NICE, 2008f, p.8)

There were a number of criticisms of the formatting and presentation of the NICE workplace guidance. For example:

Assistant HR Director, Trust Midlands

The NICE [workplace] *guidance, it needs to be refreshed, it needs to be easier to read, certainly the recommendations need to stand out.*

IT Trainer, Trust East

It's too wordy, it's too lengthy. I'm not sure it's all needed in there to say that we need to have a better mental health attitude and how we can go about it as in either the Trust or a person. It's just, no. I dunno. It's just too wordy, too long, too much information.

One of the interviewees who had responsibility for workplace HWB stated that the presentation of the workplace guidance needed to take into account the people who implement the practicalities of staff HWB policies:

Sustainability Coordinator, Trust Metropolitan

I like more visual interactive type documents ... If you're looking at getting the people that are actually going to be implementing it [the NICE

workplace guidance] *and want to create ideas then it would probably be better for it to be a bit more interactive.*

Interviewees highlighted other innovations that they believed were presented in a way that better met employer expectations:

Director of OH, Trust Metropolitan

The publications from Business in the Community, and there's a whole set of them, was much more attractive to read … The design was much better, and I actually think that it's the sort of document that people in all sorts of organisations would pick up and think, 'Oh yes, I'm going to look at this. Actually I want to read this.'

5.4.2 Sub-theme: compatibility

(i) Senior manager responses

The results showed that both senior managers and project implementers rejected the guidance as not being relevant for their needs. One of the important considerations for senior managers was to reduce sickness absence:

Associate HR Director, Trust Metropolitan

*Boorman was very, very much about how on earth do we reduce the amount of absence within the NHS?... and they had a whole range of things [*good practice examples*] … I think that's why HR people had an interest in Boorman.*

Sickness absence is easily quantifiable, and senior managers stated that, in order for an innovation to be implemented and embedded into the organisation, its costs and benefits had to be measurable:

Director of Resources, Trust East

My understanding of this [the NICE workplace guidance] *is it's not that easy to measure and so when things are unspecific, amorphous, it's very easy to find something else to spend the money on.*

Senior managers also wanted to measure changes in variables, to ensure that the resources invested were done so effectively and efficiently:

Assistant HR Director, Trust Midlands

Any one of these NICE guidance for me, as long as we could demonstrate that whatever we invested in terms of time, effort, money we would get some return from it and we could measure it, that makes it worthwhile, that's easier to do.

Similarly, senior managers wanted the guidance 'to make it clear that there was a connection between the resource and the return' (Assistant HR Director, Trust Metropolitan), with a focus on cost-effectiveness:

OH Director, Trust Metropolitan

I think NICE have to be realistic when they're setting guidance. So I think any guidance needs to take into account the organisational constraints that exist … I think for me there was a lack of a compelling argument within the guidance to say 'this is what you should do' … and this is going to be your return on investment, i.e. you're going to have to spend some money to do this, but the likelihood is you will make savings by getting people back to work quicker, etc. and this is what you'll save. Didn't say that at all. So I think it was very vague really, and didn't take a sufficiently business-like approach.

Assistant HR Director, Trust Midlands

You have to invest money into some of this stuff and what's going to be your return? So if it's going to cost you thousands of pounds to put signs up so people use the stairs, how will you know whether by spending that money that you're actually going to get a return on your investment, where's the measurable in that?… so where do you get the business case to invest the money?

It should be noted that it is not NICE's remit to set out cost implications, though they do give an implementation toolkit for organisations to identify their own cost implications in implementing the

recommendations. However, none of the interviewees, barring the CEA Manager at Trust Metropolitan, mentioned the NICE implementation toolkit. Whilst NICE refers to their toolkit in their guidance, it is in the form of a hyperlink to their website, rather than embedded within the main guidance or as an appendix to the guidance. If people print out the guidance or receive it in hard copy, they would not be able to see the toolkit. These results were quite striking because they were not unknown. Indeed, similar comments to the quotes above were mentioned in NICE's own consultation documents relating to the physical activity in the workplace and mental wellbeing in the workplace guidance. This suggests an unmet need that NICE were aware of, and one that could have easily been remedied by attaching the toolkit that was already developed onto the guidance.

(ii) Project implementer responses

The consensus from the project implementers interviewed was that the NICE workplace guidance is not relevant to their roles, which they saw as translating and implementing policies into practical on-the-ground initiatives:

Performance Manager, Trust Metropolitan

I'm the doer at the chain, rather than the kind of planner. So the planner person would be the person who would kind of use this document [NICE workplace guidance].

HWB Coordinator, Trust East

I want to know more about sort of little things that I can put in place to make small cultural changes and I didn't really think that the NICE guidelines helped me in that way.

These findings demonstrate that the interviewees who did not identify with the guidance were one of the groups of people who NICE suggested 'should take action'. The quotes below suggest that 'image' was an issue, though it is not clear whether NICE conducted market research or audience analysis

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when including groups of people as their target audience and whether they attempted to remedy the
image issue in the development of their guidance:

Sustainability Coordinator, Trust Metropolitan

Coming from the Institute of Clinical Excellence [NICE] *already makes me think that this is academic for a start, so it's like a paper, rather than something friendly that you could sort of use. So I've already got a thing in my head that's making me think 'do I really want to read this?' Or is it appropriate, 'cause it's almost a bit heavy for the role I've got. It would be more appropriate for* [the OH Director]*, but not for me I guess.*

HWB Coordinator, Trust East

I mean the NICE guidelines do come up, but it's funny, it always tends to be the older people, the managers, it's always the managers, not the health and wellbeing coordinators around the area, it's always kind of the old, over-50 managers who are talking about NICE guidelines and you just think … oh … I don't know … I know that's really bad but you just kind of think that's not for me, it's not aimed at me, it's aimed for the stuffy managers who need to know all the official language and stuff whereas yes, it's not really relevant to what I'm doing.

Project implementers across all three Trusts also believed that they did not have the authority or power to implement the recommendations. Whilst this may have been expected in Trust Metropolitan, it was also evident in the other two Trusts that were smaller and had a flatter hierarchy.

Performance Manager, Trust Metropolitan

Some things I can't do, because I just don't have the weight behind my role. I mean I'm kind of too low down the food chain to have any influence.

Administrative staff, Trust East

It would be nice if NICE gave us a bit more, from a minion doing the work sort of thing … if they would then elaborate on it. And maybe produce something that the worker, the person actually doing it, could use in conjunction with it, to say: 'OK this is great, this is what I want to achieve, what the guidance is saying but I would like to … how can I do that?'

The above perceptions raise the question as to whether NICE considered how all levels of implementers would use their guidance, given that they included such a range in their 'who should take action' section of their recommendations. In one of their responses to their consultation document, NICE stated that it is 'fundamental to the NICE process to generate guidance that is relevant to practitioners and implementable in the real world' (NICE, 2008f). There is therefore a disconnect between NICE's aim of 'real world' implementability and the perception by project implementers that they could implement the NICE guidance in their world.

Project implementers felt that 'NICE could have publicised some examples of where this specific guidance has been implemented as it's written and the success rate that it's had' (Clinical Governance Manager, Trust Midlands). This perceived unmet need from project implementers for 'real world' examples and case studies reiterates the point that NICE has not been successful in delivering guidance that is perceived as relevant to the audience that is suggested should implement the recommendations. None of the interviewees mentioned that they were aware of the NICE Shared Learning Database, for example, and it appeared that, as with the implementation toolkit, interviewees wanted case studies and examples embedded within the guidance.

CEA Manager, Trust Midlands

Shared learning I think there's an issue with and I think that shared learning only comes afterwards because if you go to like a NICE conference or something there will be shared learning there, 'This is how we did it and this is how we did it really well.' And it's like 'Well yes this is how we tried to do it too but it didn't work so well and if we'd known what you'd done we could have achieved a much better outcome, because we didn't think of it in that way.' ... I mean it's not rocket science, the evidence is there, but if the shared learning was beforehand as to how a Trust implemented it and it worked well and what didn't work well.

The importance of providing case studies was not only seen as a matter of identifying best practice; respondents believed case studies could demonstrate to organisations the potential benefits of implementing the guidance:

Clinical Governance Manager, Trust Midlands

I think when you're asking people to do something, the first thing people think is, 'What's in it for me? What is the value to me?' When I say me, I mean as an organisation, as a workforce. If you want somebody to do something added, you give them something and you say, 'I know you're really busy but can you just do that as well?' They need to see the value and the organisation needs to see the value, so maybe some examples and some feedback from NICE on how well it's been implemented elsewhere might be a driver for helping organisations to implement the NICE guidance.

5.4.3 Sub-theme: task relevance

The majority of interviewees that were involved with workplace HWB stated that the NICE workplace guidance was either common sense or that there was nothing new, and therefore not relevant to improving the performance of their tasks. The following quotes were indicative of this perception:

Assistant HR Director, Trust Midlands

I think it [the NICE workplace guidance] *didn't add any value to us because we felt we were already achieving it.*

Head of Staff Counselling Service, Trust Metropolitan

To be perfectly honest this [NICE mental wellbeing guidance] *is like bread and butter to what I do and I think what the Trust do as well.*

CEA Manager, Trust Midlands

I think for anyone to think about that [HWB] *is a good thing but I don't think you need to spend the money on NICE guidance for that, it is quite obvious. I don't think you have to spend all the money on the evidence, the research for this.*

AB *So focusing on the value and the impact – if you don't need to spend money on the NICE guidance is there an added value that the NICE guidance brings?*

No. It just puts it in black and white for an organisation.

Such perceptions led to the belief that the NICE workplace guidance did not add value to the Trust or to the work that some of the interviewees were doing on staff HWB. The overall consensus was that 'All that's done is reaffirm that we were doing the right kind of things' (OH Director, Trust Metropolitan). One interviewee suggested a reason why the guidance only reaffirmed what was already in place rather than contribute to what the Trust was doing with staff HWB:

> Public Health Consultant, Trust Metropolitan
>
> *It's set at too low a level that it just says what you're already doing … it's fairly much setting a baseline rather than an inspirational set of goals, but it's setting a 'this is the minimum you would be expected to do'.*

Given that the three case studies were – according to the RCP audit (2011) and corroborated by the interviews – at different stages of developing and implementing their health and wellbeing policies, it is interesting to note that none of the Trusts overall nor interviewees as individuals found the guidance particularly useful.

5.4.4 Sub-theme: relative advantage

Interviewees did not discuss the NICE guidance as an innovation in isolation from other similar innovations, and the lack of relative advantage of the NICE workplace guidance was a theme that ran throughout a number of interviews. Respondents highlighted the perceived omissions or weaknesses in the NICE guidance, framing other similar innovations as 'competition':

> HWB Coordinator, Trust East
>
> *There's other people that are kind of vying for your attention and they're winning at the moment.*

Relative advantage was a cross-cutting theme in terms of the attributes of the NICE workplace guidance. For example, with regard to the compatibility of the NICE workplace guidance with the needs of users, other innovations were seen to more closely match their requirements

Sustainability Coordinator, Trust Metropolitan

*I mean, we work with things like the NHS Good Corporate Citizenship
Guide to help form our Sustainable Development Committee and I find
that nice because it involves sort of scoring, it involves improvement and
you can see the value of using it.*

As a result of the perceived limitations of the NICE workplace guidance and perceived relative

advantage of other innovations, respondents found other innovations more useful for improving staff

HWB:

OH Director, Trust Metropolitan

*I think when it comes to things that might be done at an organisational
level, I don't think the NICE guidance is particularly persuasive. I think
there are many other frameworks and sets of guidance out there which
are presented in a better way, more meaningful, and sort of encourage
change.*

The OH Director above went on to highlight the Health and Safety Executive (HSE) and Business in the

Community workplace HWB tools, stating the HSE would cost out examples and Business in the

Community was powerful because 'they provided scenarios, you know, case studies as to how

guidance could be implemented' (OH Director, Trust Metropolitan). Similar to the finding in the 'task

usefulness' sub-theme, the cross-case research highlights the striking finding that, despite all three

Trusts using and having experience with different workplace HWB innovations, and despite all three

Trusts having different HWB structures and tackling staff HWB in different ways, none of the Trusts

overall felt that the NICE workplace guidance had a relative advantage over the innovations they chose

to use.

5.5 Theme 4: linkage

This theme has two sub-themes outlined in Table 22 below. In Greenhalgh et al's conceptual model

(2004a), 'linkage' occurs twice, once at the stage where the innovation is designed and once at the

stage where the innovation is implemented (though it is not a discrete event, as Greenhalgh et al themselves note the constant iterative interplay between these stages and other components in their model). The 'linkage' that links the design of the innovation to the user of the innovation has a number of components such as 'knowledge transfer', 'user involvement in the specification' and the 'capture of user-led innovation'. However, the theme that came out particularly strongly in the interviews was the 'credibility of the change agency'. A change agency is 'an organisation or other unit that promotes and supports adoption and implementation of innovations' (Greenhalgh et al, 2004a, p.332), and so this theme looks at the credibility which is held by NICE as an organisation that promotes and supports the implementation of its guidance. It should be noted that the credibility was generally discussed in the context of NICE's reputation as a guideline development body, including clinical and health technology guidelines, as well as the perception of NICE in the area of workplace HWB.

The second sub-theme in this section is found in the linkage components that link the user of the innovation with the stage of implementation. In the Greenhalgh et al (2004a) model, the components at the stage of implementation include 'project management support' and 'user orientation', but the theme that came out particularly strongly in these interviews was 'product augmentation'. Product augmentation describes the technical help (rather than the project management support) external change agents or agencies give to organisations that implement an innovation.

Whilst 'linkage' occurs as two separate components of the Greenhalgh et al model (at 'design stage' and 'implementation stage'), I have put these two components into one theme here as they link closely together.

Table 22 - Definitions of the sub-themes emerging from the 'linkage' theme

Theme	Sub-themes	Definitions
Linkage	Credibility of the change agency	The perception of NICE amongst interviewees
	Product augmentation	The availability of support and technical help to implement the NICE workplace guidance

5.5.1 Sub-theme: credibility of the change agency

Respondents commonly had a positive perception of NICE, stating that NICE had a good reputation and were reliable and trustworthy:

Lead Pharmacist, Trust Metropolitan

I can't believe that anybody in this organisation would have more knowledge and skills than what NICE have been able to put together collectively. So the collective knowledge and power of NICE I would have thought the sum of it would be greater than what any particular individual in this organisation would have.

Directorate Manager, Trust Midlands

NICE would be one of the organisations that I think the Trust would take notice of … because of their position, the credibility of the organisation.

This perception of trustworthiness also linked closely to the perception that NICE was 'kind of the authority' (HWB Coordinator, Trust East) in the areas for which they produced guidelines, and were therefore to be taken 'very seriously' (Director of OH, Trust Metropolitan). However, the reputation and perception of NICE amongst interviewees was that "NICE are known traditionally for clinical guidance" (Clinical Governance Manager, Trust Midlands):

Lead Nurse for Practice Development, Trust Metropolitan

I think NICE guidance in our Trust is very much perceived … as a medically led exercise.

The above perception is perhaps unsurprising given that NICE was originally an organisation that only produced clinical and health technology guidelines. Nevertheless, NICE had a strong reputation amongst interviewees with regard to its evidence-based methodology and the research evidence used in its guidelines. For those who did not seem to have a deeper understanding of NICE, they inferred that all of the NICE guidelines had a strong evidence base. Two interviewees who held academic posts and had expert knowledge of public health and occupational health stated caveats:

Director of OH, Trust Metropolitan

Whereas most NICE guidance is very heavily evidence-based, actually quite a lot of the public health guidance isn't.

Despite the above quote, overall NICE had strong credibility amongst interviewees in all three Trusts. Interviewees linked this credibility with the reason why their Trust implements NICE guidance, though when it came to discussion of the workplace guidance, the linkage between NICE's credibility and the implementation of workplace guidance appeared less strong.

5.5.2 Sub-theme: product augmentation

Whilst this was not expressed by general staff, interviewees with responsibility for workplace HWB initiatives emphasised the access to change agents in their decision to use an innovation. They chose to implement innovations in part due to the support that the change agents could provide. For example, the HWB Coordinator in Trust East used a competing guidance partly because:

HWB Coordinator, Trust East

The lady that we worked with was local so she came out and would talk you through it.

Likewise, the Assistant HR Director in Trust Midlands stated that, when implementing guidance, Trust Midlands are 'Looking for somebody to come on site' (Assistant HR Director, Trust Midlands).

Project implementers found face-to-face contact particularly useful, as it helped clarify the practicalities of implementation:

> HWB Coordinator, Trust East
>
> *Being able to work with the lady in person and go through the guidelines and actually discuss where we were, and what we could do to get to where they needed us to be to win the award. It was just a lot easier.*

The above views on product augmentation were not seen in Trust Metropolitan. Whilst it is not clear as to the exact reason why product augmentation was not an issue for interviewees in Trust Metropolitan, it may be linked to Trust Metropolitan having the most resources (including staff) out of the three case studies, as well as the most resources and expertise with relation to staff HWB.

It should also be noted, and as the background chapter highlighted, that NICE has change agents in the form of 'implementation consultants' capable of delivering some level of product augmentation. However, only one of the interviewees mentioned the NICE implementation consultants, and that particular respondent discussed the implementation consultants in the context of clinical guidelines rather than the workplace guidance.

5.6 Theme 5: the inner context (system readiness)

This theme describes the perception interviewees had with regard to how implementation of the NICE workplace guidance fitted with the priorities of their Trusts and with the resources their Trusts dedicated to staff HWB. There is relatively little research into system readiness in the context of diffusion of innovation, but it can be described as the favourable contextual factors of an organisation in relation to its readiness and willingness to implement a specific innovation (rather than innovation in general) (Greenhalgh et al, 2004a).

In the Greenhalgh et al (2004a) model, the sub-theme 'fit with system and its goals' described in Table 23 below is described as the 'innovation-system fit'. Essentially, it is how the innovation fits with the organisation which is implementing it or to which it is being disseminated. This fit can be in the form of values, norms, goals, strategies and ways of working. The better the innovation matches these characteristics which are held by the organisation, the more likely it is to be successfully implemented (Greenhalgh et al, 2004a).

Dedicated resources', which includes time as well as personnel and money, is a sub-theme that describes the resources that an organisation attaches to the implementation or dissemination of that particular innovation. Greenhalgh et al (2004a) highlight that it is not only the level of resources dedicated to a specific innovation that determines the success of implementation, but also whether resources are recurrent.

Table 23 - Definitions of sub-themes emerging from the 'the inner context (system readiness)' theme

Theme	Sub-themes	Definitions
The inner context (system readiness)	Fit with system and its goals	The perceived fit between the innovation and competing local priorities of the organisation
	Dedicated resources	The hypothecation of resources towards the implementation of a specific innovation

5.6.1 Sub-theme: fit with system and its goals

The issues around competing local priorities link closely with a number of other themes that emerged from the interviews. For example, lack of slack resources links closely with the financial priorities of Trusts, whilst sanctions and incentives (sub-themes described later) strongly influence the order of priorities for Trusts. Senior managers in all three Trusts believed strongly that their respective Trusts had to set their own path in order to be successful:

Director of Resources, Trust East

In a way you get to the stage where yes there are some high profile things that we have to tick the box but actually as an organisation if you're going to be successful you need to set your own targets, set your own objectives, be clear what we're aiming for as an organisation. Ideally that will fit in with everybody else's and just by ploughing our own furrow we'll be able to tick everybody else's box as well.

The current goal for Trust Metropolitan was reaching Foundation Trust status, and that meant that cost cutting was the main objective for the Board.

Clinical Effectiveness and Audit Manager, Trust Metropolitan

It's all about getting Foundation Trust here, financial balance. OK, if they don't do that then there is no hospital Trust. That's unfortunately the situation we're in.

The main goal of the Board in Trust Midlands is to successfully carry out complete relocation of the Trust to a different site, in order to expand its services to meet growing demand. Linked to this move, the Trust has invested in a large IT modernisation programme. The sector regulator for health services in England, Monitor, has rated the Trust's finances as good, and whilst resource constraints were mentioned by interviewees, this subject was not at the forefront of interviews as it was in Trust Metropolitan. The Trust has a good reputation in its clinical speciality, and meeting the needs of patients was continually emphasised by interviewees. For example:

Assistant HR Director, Trust Midlands

Whatever we have goes back to the patient and for the benefit of the patient, so therefore anything in terms of health and wellbeing I think really does have to be cost-neutral.

The main priorities in all three Trusts appeared to be centred on financial savings and patient care. In Trust East, the main priority was improving the financial and governance risk ratings it earned from Monitor. Interviewees noted that if funding or implementation requests did not reconcile with the

Board's goals they would have difficulty attracting resources. Conversely, initiatives that could meet one of the main objectives in the short-term would become a Trust priority:

CEA Manager, Trust Metropolitan

Much of the policy writing at the moment is sort of dedicated if you like, to us delivering on the NHSLA Assessments later on in the year. So priorities for policy writing, they are all linked to NHSLA delivery.

Lead Nurse for Practice Development, Trust Metropolitan

Often it's only perceived as a priority when we're told we'll lose our NHSLA level three accreditation if we don't implement this.

Interviewees stated that for staff HWB to be prioritised by the Trust or for the Trust to invest any significant amount of resources towards implementing the NICE workplace guidance, it must meet Trust priorities, which as one senior manager put it, had to 'either save money or improve income' (Associate Director of Nursing, Trust Metropolitan):

OH Director, Trust Metropolitan

It's trying to fit health and wellbeing into the targets and the levers that Trust management take seriously.

Interviewees stated that even if initiatives did meet one or more of the main goals of a Trust they would have to do so in the short term to be considered credible options for funding. As one senior manager mentioned, interventions would have to deliver results 'in the sort of timescale that people are interested in' (OH Director, Trust Metropolitan). Interestingly, it was suggested that the priority to achieve cost savings may have led to pressure to implement initiatives that reduce sickness absence in order to reduce Trusts' spending on agency staff (which are more expensive than Trust staff):

Physiotherapist, Trust East

If you're looking at it from a sort of, a pessimistically sort of hard-arsed perspective, then it could just come down to, you know, our locum bill this

> *last year cost us 6.9 million, we've got to make cuts of ten million this year, we need to find ways of saving money in the Trust which is driving everything and a lot of things are driven, are coming down to money, aren't they?*

Some interviewees stated that it was important for an innovation to meet the need to quantify the costs and benefits, as senior managers who funded initiatives required a demonstration of the extent to which initiatives met Trust priorities. This links closely with the 'compatibility' sub-theme described earlier:

> Public Health Programme Manager, Trust Metropolitan
>
> *Public health and health improvement interventions is something which has been on the agenda for a few years now and there's always the same case saying healthier staff means less sick days and more productive staff, less presenteeism and things like that. It's very hard to quantify it and in this current climate, I would say that hospitals are run on the financial cost savings strategies and cost improvement programmes. It's the black and white in the financial calendar year of how much you can save and it* [the NICE workplace guidance] *needs to be a bit clearer – improving staff health and wellbeing is not black and white in terms of the financial gains that we make. And they're not immediate either, and so I feel that they* [staff HWB policies] *might be slipping slightly down the agenda, at the moment, in terms of local financial support for such initiatives coming from board level.*

The need to quantify cost savings and linking that to Trust priorities was echoed by the OH Manager and Assistant HR Director in Trust Midlands:

> OH Manager, Trust Midlands
>
> *A lot of the work that we're doing at the moment is all about service improvement, so it will be looking at service improvement. Part of that service improvement is reducing costs. If we can prove that by spending some money actually we're going to save an awful lot more by reducing sickness absence, then we may well get through that way. But it is all about adding value and service improvement.*

Assistant HR Director, Trust Midlands

AB *You mentioned that if it* [staff HWB innovation] *was too difficult to measure then it wouldn't be a priority …*

How would I be able to sell that to the Board, how would I say 'Look we really need to invest in this' because what they're saying is 'What are we going to get back as an organisation?'

In addition to cost savings, patient care was another high priority for the Trusts:

OH Manager, Trust East

We can improve the mental health of our staff, but they might say, 'But we need to spend money on this and that's more important for patient care, direct patient care.' This [improving staff HWB] *would still influence patient care but this is direct patient care and there's that gap.*

OH Director, Trust Metropolitan

In terms of how the Trust would respond to guidance, there has to be a clear link to the Trust's objectives as a Trust. Most of those are going to be around patient care.

Assistant HR Director, Trust Midlands

Our business is patients, so the health and wellbeing of our staff is almost like a sideline, although it's important it's not our key business.

Nevertheless, some interviewees, particularly in Trust East, believed that their Trust Board was actively engaged with the issue of staff HWB:

OH Manager, Trust East

We have signed up to seven of the [Public Health Responsibility Deal workplace] *pledges. We had Professor Dame Carol Black here for a presentation on all our pledges and I think it is all linked together. The Department of Health can see that we're taking it seriously but also our Trust Board because we had our Chief Executive there and various other people from the Trust Board were involved in that presentation so they know about it as well.*

In should be noted that Trust Metropolitan also signed up to the workplace Responsibility Deal pledges (Department of Health, 2015), though interviewees did not equate this to the Trust Board being actively engaged in staff HWB. The contrast between Trust East and Trust Metropolitan was quite striking. Almost all interviewees in Trust East had a positive view of their Trust's position towards staff HWB and most interviewees emphasised that an organisational priority for the Trust was to ensure that staff are happy and content at work. The following statement is indicative of the general perception:

IT Trainer, Trust East

Even our Chief Executive will hold open forums for discussion to let us know what's going on … I think if you look at the whole umbrella most of the top do care about the staff underneath.

This is in contrast to both positive and negative views from interviewees in Trust Metropolitan about their Trust's commitment to staff HWB:

Cancer nurse, Trust Metropolitan

If you were to interview the Chief Executive he would say 'well of course we are committed, of course we are, we've got all these things in place, of course we care about all our staff', but sadly the reality is not always quite the same.

Lead Pharmacist, Trust Metropolitan

The Trust obviously do rate health and wellbeing because they've got that there for us and we do have initiatives about living healthier or cycling to work.

Another view held by interviewees in the three Trusts was that there was an element of pragmatism behind the commitment to staff HWB:

HR Director, Trust East

Sickness absence is a key indicator for us in terms of health and wellbeing. Our staff survey, because of the staff engagement and morale benefits of health and wellbeing, it helps improve our performance in the national staff survey. The national staff survey, as you are aware, contributes to the CQC assessment of us as an organisation, so there's the business benefit. But also if staff feel happy in their work, they give a better service to our patients. Where there are happy staff, there are happy patients.

Departmental Manager, Trust Metropolitan

The immediate priority is the patient, the patient experience. That's why we are here. But at the same time if we don't look after our own health we too can end up as patients.

5.6.2 Sub-theme: dedicated resources

All three Trusts hypothecated some funds towards staff HWB. In Trust East, discussions on dedicated resources centred on the use of the Trust's Charitable Fund:

Director of Resources, Trust East

Everything about health and wellbeing lends itself to charitable funding.

The Charitable Fund was set up by the Trust to raise money for causes benefiting patients, visitors and staff. Unlike the Trust's NHS budget, the Charitable Fund does not pre-commit funds, and cash reserves are built up continuously, with the board of the Charitable Fund making ad hoc decisions on how the money should be spent. This level of flexibility is not available to the NHS Trust budget.

The HWB Coordinator position is funded by the Charitable Fund. A prerequisite for funding this position was that responsibilities of the role are split evenly between fundraising and staff HWB, and as a result most of the Trust's HWB initiatives take on fundraising aspects, such as marathons and Sports Relief. Linking fundraising and staff HWB allowed the Trust to fund more HWB initiatives by badging them as charitable fundraising events. In part, this was a way to alleviate criticism that was

expected to emerge from a proportion of staff. Nevertheless, the Trust does not solely rely on charitable funding to allocate resources to HWB initiatives:

Director of Resources, Trust East

There are things where it's easier to use charitable funds but that doesn't mean that we wouldn't take the decision, and indeed we have taken decisions where we'd spend normal exchequer funding on initiatives for staff.

The decision on whether to use the NHS Trust budget or the Charitable Fund is an informal process, with no formal criteria set down and codified. Proposals for HWB initiatives are sent to the HR Director (usually via the HWB Coordinator) where a decision is made on whether they should be implemented. If the initiatives require resources that the HR Director cannot or does not want to expend from the HR budget, a formal request is made to the Director of Resources where a decision is taken on how to fund the initiative based on the Trust's financial position at the time, the financial position of the Charitable Fund, and what commitments the Trust has that are forthcoming.

As the OH Department in Trust Metropolitan is well resourced, it sometimes has money left over at the end of the year from its budget. As a result, it runs 'HWB days', which are one-off events that are meant to attract staff to other HWB initiatives. These events involve dieticians, staff from OH and HR, staff from Estates and Facilities departments and external organisations wanting to promote their HWB products. As with the other two Trusts, Trust Metropolitan has a Charitable Fund and when it does not have money left over to run HWB days, it applies for funding from the Charitable Fund. Whilst the Charitable Fund is mainly used for investing in patient initiatives, it has also been used to invest in staff HWB initiatives particularly around mental well-being. However, unlike Trust East, the Charitable Fund in this Trust is not the predominant source of investment for staff HWB initiatives, and it was mentioned by only two interviewees in this Trust.

Whilst Trust Metropolitan has established a number of physical activity initiatives, such as loaning pedometers to encourage walking, most of these initiatives do not represent any significant money spent from the Trust's budget because the OH Department applied for and won external funding for these schemes. Trust Metropolitan also provides a robust and well-advertised Staff Counselling service:

> OH Director, Trust Metropolitan
>
> *We've done a lot to try to improve issues around stress at work. We have a bullying and harassment helpline. We've trained mediators to help with conflict resolution. We've done a lot of work around the sort of things that cause people to be stressed.*

This is the largest investment in resources for a staff HWB service out of all three Trusts studied by way of its capital infrastructure and personnel (though it must be reiterated that this Trust is also larger and has more resources at its disposal). This service provides up to eight free counselling sessions to staff as well as ad hoc acute counselling. Whilst the counselling service is better resourced than in the other two Trusts, one interviewee argued that relative to the demand and need for staff counselling in this Trust the Board has not invested the required amount:

> Member of Staff Counselling service, Trust Metropolitan
>
> [The Staff Counselling] *service is very underfunded, according to NHS executive guidance for counsellors in the workplace.*

In Trust Midlands, dedicated resources towards staff HWB was not discussed as thoroughly as in the other two Trusts. One interviewee was concerned that Trust Midlands did not have a person dedicated to staff HWB:

> Sports therapist, Trust Midlands
>
> *I think there's no one person that is dedicated to like health and wellbeing. There's people who have got roles and part of their role is to be maybe in charge of the health and wellbeing but often they've got such other busy*

roles that I imagine it is something that gets pushed to the side a little bit because it's not the number one priority.

The main outcome desired by Trust Midlands in terms of investing in staff HWB was a reduction in sickness absence and staff agency spends. However, it was unclear what initiatives directly related to these objectives. Nevertheless, Trust Midlands has had staff HWB initiatives:

> Departmental Manager, Trust Midlands
>
> *There has been lots of initiatives …They have had low stress things, they have had people giving massage, Japanese shiatsu, they have had that.*

However, most of the staff HWB initiatives in the Trust have been self-funding (through charity events) or funded by external health companies trying to sell services. Unlike Trust East which has an HWB coordinator, or Trust Metropolitan which has large OH and Public Health departments, Trust Midlands does not have a dedicated person to lead on staff HWB initiatives. This means that staff HWB initiatives tend to be small-scale, within departments and led by staff.

5.7 Theme 6: Adoption

In this context, adoption refers to processes and adjustments (rather than discrete events) that take place in an organisation with the intention to make full use of an innovation in order to enhance an organisation's competitiveness or effectiveness. Greenhalgh et al (2004a) point out that a 'neat' definition of adoption presumes that organisations are rational actors, and argue that rather than adoption being a sequential process following a set path, it should be thought of as organic and iterative changes with complex actions that are not always rational.

Awareness of the innovation (see Table 24 below) is seen as the first stage of adoption, when individuals or organisations first have knowledge of the innovation (Ryan and Goes, 1950 cited in Greenhalgh et al, 2004a). Knowledge of the innovation can be achieved through multiple means, such as interpersonal communication or marketing, but the focus in this sub-section is not how the

interviewees became aware of the NICE guidance (as this will be discussed later), but the extent to which they are aware.

Implementation is one of the later stages in the adoption process, and refers to whether the innovation is put to use or is rejected by the organisation or individuals (Ryan and Goes, 1950 cited in Greenhalgh et al, 2004a). The other stages of the adoption process are 'persuasion' (when attitudes towards the innovation are formed) and 'decision' (the activities that lead to a choice of whether the innovation is adopted or rejected) – both of which come after knowledge of the guidance – and 'confirmation' (attempts to measure the impact of the innovation), which comes after 'implementation' (Ryan and Goes, 1950 cited in Greenhalgh et al, 2004a). These stages were not included as sub-themes in this sub-section because other sub-themes in this conceptual framework better described the responses of interviewees.

Table 24 - Definitions of sub-themes emerging from the 'adoption' theme

Theme	Sub-themes	Definitions
Adoption	Initial awareness of the guidance	Knowledge of the NICE workplace guidance by interviewees
	Implementation	Use or rejection of the innovation

5.7.1 Sub-theme: initial awareness of the guidance

During the interviews, I showed some of the interviewees in all three Trusts the quick reference guides for the NICE workplace guidance. This was because they either stated that they were not aware of the guidance, or it became clear during the interview that it would be more conducive to the quality of the answers if they were shown the quick reference guides.

Table 25 - Awareness and impression of the NICE workplace guidance

Trust	Percentage of interviewees who stated they were aware of the guidance	Percentage of interviewees who were shown the NICE quick reference guides	Percentage of interviewees who stated that their Trust was already doing what the guidance recommended	Percentage of interviewees who stated there was nothing new or surprising in the guidance
Trust East	10/16 (62.5%)	8/16 (50%)	11/15[13] (73.3%)	6/15 (40%)
Trust Metropolitan	11/19 (57.9%)	11/19 (57.9%)	10/19 (52.6%)	5/19 (26.3%)
Trust Midlands	18/22 (81.8%)	8/22 (36.4%)	9/22 (40.9%)	7/22 (31.8%)
Total	39/57 (68.4%)	27/57 (47.4%)	30/56 (53.6%)	18/56 (32.1%)

Table 25 shows the percentage of interviewees to whom I showed the guidance, as well as the percentage who stated they were aware of the guidance. The table also shows the percentage who said that their Trust already met the guidance and the percentage that said there was nothing new or surprising in the guidance. One third of interviewees stated that there was nothing new or surprising in the guidance, and over half stated that their Trust was already doing what the guidance recommended. Whilst these figures may initially appear low considering the findings, it should be noted that not all interviewees were aware of their Trust's HWB initiatives. It should also be noted that I did not specifically seek this information (for example, the newness of the contents of the guidance) in the interviews, so these figures reflect un-prompted perceptions.

A representative response from the interviewees who said they were aware of the guidance but had not read it (or it was not clear whether they had read it) is exemplified in the following statements:

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[13] One interviewee appeared to confuse the workplace guidance with other NICE guidance, and did not mention any specifics; therefore, their answers were not included in this category.

Moving and Handling Advisor, Trust East

I'm not 100% au fait with them. I am aware that they're there and we have got a copy … But no, I'm not 100% au fait with them.

Head of Operational HR, Trust Midlands

AB *Are you aware of the workplace guidance?*

Yes.

AB *How did you become aware of it?*

I don't know. A lot of things we become aware of are just by osmosis.

Assistant HR Director, Trust Metropolitan

AB *And are you aware of the NICE guidance?*

In an osmotic way.

Of the 16 interviewees in Trust East, ten interviewees said they were aware of the NICE workplace guidance. However, one interviewee had read the guidance as preparation for the interview, and was not aware of it beforehand. One interviewee confused the workplace guidance with other NICE guidance, one interviewee was indeed aware of the guidance but had not read it and it was unclear whether three interviewees were aware of the NICE workplace guidance or confused the workplace guidance with general workplace HWB initiatives. Thus, of the 16 interviewees, four had read the NICE workplace guidance prior to receiving an interview request for this project. Of the 19 employees interviewed in Trust Metropolitan, 11 interviewees said they were aware of the NICE workplace guidance. However, two interviewees read the guidance as preparation for the interview, and stated that they were not aware of the guidance before the request to be interviewed for this project. Two further interviewees knew about the workplace guidance through their role in the Trust. With regard to almost all of the other interviewees, it was unclear as to whether they knew about the NICE workplace guidance or confused the workplace guidance with general workplace HWB initiatives. Of

the 22 interviewees in Trust Midlands, 18 interviewees said they were aware of the NICE workplace guidance. However, four interviewees read the guidance as preparation for the interview, and were not aware of the guidance before the request to be interviewed. With regard to almost all of the other interviewees, it was unclear as to whether they knew about the NICE workplace guidance or confused the workplace guidance with general workplace HWB initiatives.

Of the eight interviewees in Trust East who were shown the NICE workplace quick reference guides, six stated that the Trust was already doing what the guidance recommended and three said there was nothing new or surprising in the recommendations. All four of the interviewees who had read the NICE workplace guidance prior to the interview request stated that the Trust was already doing what the guidance had recommended, and one of those interviewees stated that there was nothing new or surprising in the recommendations.

Of the 11 interviewees in Trust Metropolitan to whom I showed the NICE workplace quick reference guides, five stated that the Trust was already doing what the guidance recommended and three said there was nothing new or surprising in the recommendations. All four of the interviewees in Trust Metropolitan who had read the NICE workplace guidance prior to being requested to be interviewed stated that the Trust was already doing what the guidance had recommended, although only two of those interviewees stated that there was nothing new or surprising in the recommendations.

Of the eight interviewees in Trust Midlands to whom I showed the NICE workplace quick reference guides, three stated that the Trust was already doing what the guidance recommended and two said there was nothing new or surprising in the recommendations. All four of the interviewees who had read the NICE workplace guidance prior to being requested to interview stated that the Trust was already doing what the guidance had recommended, and three of those interviewees stated that there was nothing new or surprising in the recommendations.

There are a number of things to note about these findings. To begin with, only 69% of respondents were aware of the NICE workplace guidance, despite having received letters prior to the interviews that the project was concerning the NICE guidance. Trust Metropolitan had the lowest percentage of interviewees stating that they were aware of the guidance, despite having the most resources dedicated to staff HWB. Trust East and Trust Metropolitan had similar levels of awareness, despite the organisations being very different in terms of structure and size. Trust Midlands had the highest percentage of interviewees stating that they were aware of the NICE guidance, though it should be borne in mind that the interviews were organised by the Assistant HR Director who made the interviewees aware of the project.

The percentage of interviewees who believed their Trust was already meeting the NICE workplace guidance recommendations ranged from 40% in Trust Midlands to 73% in Trust East. The percentage of interviewees who believed there was nothing new or surprising in the NICE guidance ranged from 26% in Trust Metropolitan to 40% in Trust East. The reasons for the differences in responses between the Trusts is not clear, though it should be noted that a range of staff were interviewed and there was a difference in the level of knowledge with regard to the NICE guidance and Trust HWB initiatives. In all three Trusts, most senior managers and staff members with direct staff HWB responsibility believed that their Trust was already meeting the NICE workplace guidance and that there was nothing new or surprising to the recommendations.

When asked about the spread of awareness of the NICE workplace guidance most interviewees in all three Trusts believed at best it was narrow. The following are indicative of the responses:

> OH Manager, Trust East
>
> *I would say it's* [awareness of the NICE workplace guidance in their Trust] *more concentrated.*

Public health consultant, Trust Metropolitan

I would say it's [awareness of the NICE workplace guidance in their Trust] *highly concentrated. Can't imagine more than about two people know it exists.*

Clinical Audit and Effectiveness Manager, Trust Midlands

AB *Is awareness of the* **[NICE workplace]** *guidance concentrated or widespread throughout the Trust?*

Oh, it's concentrated, it's not widespread.

AB *Concentrated to whom?*

I would say we know about it because we put it out there, so clinical audit and HR, Occupational health but that comes under HR anyway.

5.7.2 Sub-theme: implementation

Each Trust had a formal process for disseminating and implementing NICE guidelines in their organisation. This process was influenced by the CQC mandate for all Trusts to have a formal process of dissemination and implementation for all NICE guidance relevant to a given Trust. However, the CQC requirement for having formal processes for the dissemination and implementation of NICE guidance appears to have led to 'box ticking':

Clinical Governance Manager, Trust Midlands

We do have a process for recording the implementation but that's just a framework. It's just a tick box exercise basically.

The owners of the NICE pro forma in all three Trusts did not recollect seeing the guidance prior to the RCP audit, even though they received the NICE guidance through the Trust's formal process. It is clear, therefore, that the box-ticking resulting from the formal processes of demonstrating compliance had not led to improved internal monitoring or re-examination of the Trust's workplace HWB policies:

OH Manager, Trust East

I didn't know its [the NICE workplace guidance] *existence till I did the* [RCP] *audit and then I printed it off.*

Some interviewees stated that the flexibility in the NICE recommendations made it easier for the Trust to state that they were compliant with the guidance:

CEA Manager, Trust Metropolitan

There was a statement which we've recorded as compliant, that we were fully compliant in terms of infrastructure and process, but naturally in the terms of implementing those robust processes there may occasionally be moments when we fall short of what is stated compliance.

There were a number of important similarities between the Trusts with regard to their processes. For example, in each Trust the Clinical Effectiveness and Audit (CEA) Manager is the first person to formally receive NICE guidelines through the NICE monthly email bulletin that publicises all of the newest NICE guidance and consultation documents. The CEA Managers lead on their Trust's compliance process with regard to NICE guidance and clinical audits. Each Trust also has an 'owner' – typically a senior manager or head of service – for each NICE guideline who is responsible for completing their Trust's pro forma regarding the level of compliance with that particular NICE guideline. The owners are also the lead for the implementation of the respective NICE guidelines. The CEA Managers are responsible for disseminating the guidance to an owner.

The pro formas in each Trust generally sought to identify similar things. The owner is asked to indicate what they think are the areas of the NICE guidance the Trust has already completed, the areas that they think the Trust should prioritise for action, the areas where implementation can be delayed because they are perceived to be less important than other areas, and the areas that are perceived to be intransigent or difficult to implement due to structural issues such as funding or the staff skill mix.

The owners of the NICE workplace guidance in all three Trusts completed their pro forma stating that their Trust had fully met all relevant recommendations in the NICE workplace guidance. However, the exact details of the processes of dissemination and implementation differed in each Trust, as illustrated by Figures 10-12 below:

Figure 10 - Formal dissemination and implementation process for all NICE guidance in Trust East

```
┌──────────────────────┐    ┌──────────────────────┐    ┌──────────────────────┐
│ Clinical Effectiveness│   │ NICE Coordination Group│  │ Report is sent to the │
│ and Audit (CEA) Manager│→ │ reviews and writes a  │→ │ Operational Group who │
│ receives NICE guidance│   │ report on NICE guidance│  │ agree allocation      │
│                      │    │ and allocates an owner│   │                      │
└──────────────────────┘    └──────────────────────┘    └──────────────────────┘
         │                                                          │
         ▼                                                          ▼
┌──────────────────────┐    ┌──────────────────────┐    ┌──────────────────────┐
│ NICE guidance and pro │   │ Owner collects evidence│  │ Owner sends the       │
│ forma are sent to     │→  │ and consults          │→ │ completed pro forma   │
│ relevant owner        │   │ stakeholders to complete│ │ back to the CEA Manager│
│                      │    │ the pro forma         │   │                      │
└──────────────────────┘    └──────────────────────┘    └──────────────────────┘
         │
         ▼
┌──────────────────────┐    ┌──────────────────────┐
│                      │    │ CEA Manager writes a  │
│ CEA Manager follows up│→  │ quarterly report on NICE│
│ any relevant actions  │   │ guidance in the Trust and│
│                      │    │ sends to senior clinical│
│                      │    │ leads                 │
└──────────────────────┘    └──────────────────────┘
```

Figure 11 - Formal dissemination and implementation process for all NICE guidance in Trust Metropolitan

| CEA Manager receives NICE guidance | → | NICE guidance and pro forma are sent to relevant 'owner' | → | Owner collects evidence and consults stakeholders to complete the pro forma |
| Owner sends the completed pro forma back to the CEA Manager | → | CEA Manager follows up any relevant actions | → | CEA Manager writes a quarterly report on NICE guidance in the Trust and sends to senior clinical leads |
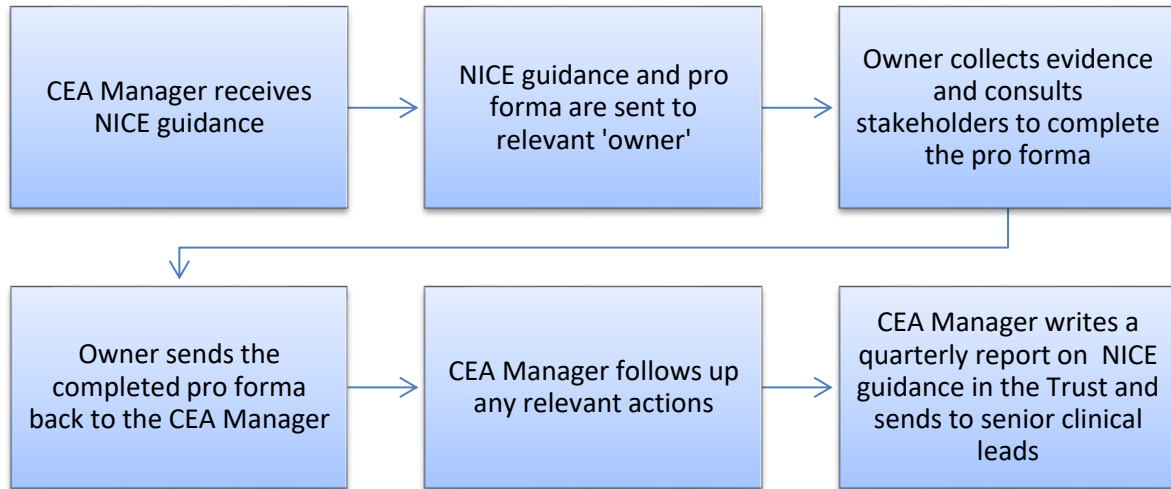
Figure 12 - Formal dissemination and implementation process for all NICE guidance in Trust Midlands

CEA Manager receives NICE guidance	→	NICE guidance and pro forma are sent to relevant 'owner'	→	Owner collects evidence and consults stakeholders to complete the pro forma
Owner sends the completed pro forma back to the CEA Manager	→	CEA Manager send the information to the Clinical Governance (CG) Management Group	→	CG Management Group signs off the pro forma and monitors completion
CG Manager writes a quarterly report on NICE guidance in the Trust and sends to senior clinical leads				

Implementation of the NICE guidance in Trust East: formal processes of dissemination

As the person responsible for initiating and coordinating the NICE dissemination and implementation process in the Trust, the CEA Manager is a member of Trust East's NICE Coordination Group. Membership of the group consists of the Trust's:

- Clinical lead for NICE (who is the Deputy Medical Director),

- Pharmacy lead for NICE

- Two Business Performance Managers (who are responsible for business cases and other financial aspects of implementing the NICE guidance)

- CEA Manager.

The NICE Coordination Group meets twice a month and writes a report reviewing the NICE guidance and allocates each guidance to an owner via the CEA Manager. Unfortunately it was not possible to obtain the pro forma for Trust East.

The report is then disseminated by the CEA Manager to the Trust's Operational Group. The Operational Group oversees all operational aspects in the Trust, including the implementation of NICE guidance. The Trust's executive lead for the implementation of NICE guidance is also the Executive Operational Director and chairs the Trust's Operational Group. The Trust's Operational Group reviews the report written by the NICE Coordination Group and agrees the group's allocation of NICE guidance to owners. As with all NICE guidelines, the workplace guidance followed this process.

The CEA Manager allocated the workplace guidance along with the pro forma to the HR Director. The pro forma was returned to the CEA Manager stating that no further action was needed:

> Clinical Governance Manager, Trust East
>
> *When the baseline assessment was completed we were already compliant*
> *with all areas because our occupational health and human resources*
> *department were already working on projects that fitted in with the*

actions that were identified in the guidance, and so there wasn't anything further to actually undertake on that.

This meant that there were no difficulties or iterations in the completion of the pro forma:

CEA Manager, Trust East

It was quite short and simple as opposed to being a long-term implementation with action plans et cetera …

Implementation of the NICE guidance in Trust Metropolitan: formal processes of dissemination

Upon receiving the NICE workplace guidance, the CEA Manager, along with another colleague in the Clinical Effectiveness and Audit department, ascertains which Clinical Programme Group (CPG) in the Trust the guidance would be most relevant for and then determines the most relevant clinical department within the CPG for that guidance. The CEA Manager then sends the Head of that department (colloquially known in the Trust as 'Chief of Service') the NICE guidance and the Trust's pro forma (see box 8).

If the completed pro forma highlights any issues that need particular action, a formal business case is required to go to the Head of the relevant Directorate, particularly if large resource expenditure (such as a service reconfiguration) is needed to comply with an aspect of the guidance. If relevant, the owner will consult stakeholders with secondary or peripheral interest in the guidance, but will still have the responsibility to collate the necessary information and complete the pro forma.

Box 8 - Sections included in the pro forma template document for Trust Metropolitan

1. CPG and nominated lead
2. Membership of working group if needed
3. NICE title/number/type
4. Evidence of compliance with NICE guidance (are there cross-CPG implications with this guidance / is PCT input required?). *Brief summary including dates and methods of evaluation (or plans to evaluate), recommendations for further improvement.*
5. Areas of practice not in compliance with NICE guidance (see also 7+8). *Briefly list area with reasons (finance, facilities, training, clinical disagreement). If appropriate, lead for actions to be undertaken and projected completion date.*
6. If not fully compliant what are the risks? Consider whether the risk needs to be included on the department risk register.
7. Financial/resource implications
8. Implementation plan to ensure compliance. Are there any areas you feel will not be met despite action?
9. Areas/factors which cannot, due to lack of resources, or should not, in the opinion of the working party, be implemented.
10. In your view, which of the following is applicable to this guidance, is [Trust Metropolitan]:
    a. Fully compliant
    b. Partially compliant
    c. Not compliant
    d. Not applicable to this Trust
    e. Work in progress (for Clinical Guidelines less than three years old only)

Upon receiving the NICE physical activity workplace guidance, there was uncertainty as to which person should take ownership of its implementation in the Trust. This is because the guidance stated that the recommendations were relevant to OH, HR, Estates and Public Health departments, all of which have close working relationships with each other in matters of promoting physical activity in the workplace:

> OH Director, Trust Metropolitan
>
> *The person in the Trust who coordinates the Trust's response to NICE guidelines has contacted me. And I am perceived to be the person that they contact about this. Although there was some uncertainty originally when they first came out. They weren't entirely sure who should be contacted… Because I think one of the problems with the NICE guidelines is there's a lack of focus as to who should implement what …Take physical activity guidelines for example. Some of it is clearly in the Estates ballpark.*

After informally enquiring with the Director of OH, the CEA Manager decided that the NICE physical activity workplace guidance, along with all future NICE workplace guidance (such as the mental wellbeing guidance), would be owned by the Director of OH.

The CEA Manager stated that the reason the pro forma and workplace guidance are sent to only one person, even if the guidance is relevant to other stakeholders, is to make things more manageable for the Clinical Effectiveness and Audit department in terms of follow-up and communication. Additionally:

> CEA Manager, Trust Metropolitan
>
> *The reason behind our process is to avoid a scattergun approach.*

The Director of OH completed the pro forma, and sent it back to the CEA Manager stipulating that the Trust was fully compliant with the NICE guidance and that no further action was required. It is beyond the scope of responsibility for the CEA Manager to scrutinise a pro forma once compliance is stated:

> CEA Manager, Trust Metropolitan
>
> *If a Chief of Service* [the Director of a Clinical Department] *tells us that in their view we are compliant as a Trust with that guidance then we will take that as, we'll accept that as it is stated... as far as paperwork is concerned, if they've come back and said they're compliant then they're compliant.*

Implementation of the NICE guidance in Trust Midlands: formal processes of dissemination

Trust Midlands had the simplest formal process for disseminating and implementing NICE guidance out of the three Trusts. There is no set process or criteria for the CEA Manager to determine whether a piece of NICE guidance is relevant to the Trust; the CEA Manager determines this through experience and knowledge of the Trust's services and departments, and then disseminates the pro forma (see Box 9 below) for the accompanying guideline.

Box 9 - Sections included in the pro forma template document for Trust Midlands

1. Type of NICE guidance/quality standard
2. Directorate
3. Speciality
4. As an initial assessment of this guidance, do we comply with this guidance? (*Fully compliant/partially/non-compliant/not relevant to this Trust*)
5. If partial or non-compliant please complete action plan
6. Please apply evidence below to support this conclusion, this may be tested by various methods including audit. (This may be an opportunity to add this to your forward audit plan)
7. Name/position/date

Sections included in the action plan appended to the pro forma

8. Recommendation
9. Action needed to comply
10. Resource needed to comply
11. Who is responsible?
12. Date it will be achieved?

Once the pro forma is completed by its delegated owner, the CEA Manager disseminates it to the Clinical Governance Management group. The Clinical Governance Management group signs it off and monitors any needed actions if necessary. The Assistant HR Director was identified by the CEA Manager as the main owner for the workplace guidance in this Trust.

5.8 Theme 7: communication and influence

This theme describes 'communication and influence' which is a component of the Greenhalgh et al (2004a) diffusion of innovation framework and contains a spectrum of sub-components ranging from 'diffusion' (which is informal and unplanned communication) to 'dissemination' (which is formal and planned). This section contains the sub-theme 'marketing', which falls in the middle of the 'communication and influence' spectrum and emerged strongly in the interviews, and the sub-theme 'informal communication'.

The sub-themes (see Table 26 below) that came out particularly strongly in the interviews were not clearly defined in Greenhalgh et al (2004a). For the purposes of this project I use the definition of

'marketing' provided by the American Marketing Association as being the 'set of institutions, and processes for creating, communicating, delivering, and exchanging offerings' (American Marketing Association, 2014), although marketing can also be thought of more broadly as the 'process responsible for identifying, anticipating and satisfying customer requirements profitably' (Chartered Institute of Marketing, 2015). I define the sub-theme 'informal communication' as the informal and unplanned methods of communicating an innovation.

Table 26 - Definitions of sub-themes emerging from the 'communications and influence' theme

Theme	Sub-themes	Definitions
Communication and influence	Marketing	Communication methods that persuade the target audience to purchase or use a product
	Informal communication	Informal and unplanned methods of communicating an innovation

5.8.1 Sub-theme: informal communication

One of the most striking findings from the interviews came under the sub-theme of 'informal communication' and linked closely with the sub-theme 'implementation'. The finding was that none of the owners of the respective Trusts' NICE workplace guidance pro forma recollected being made aware of the guidance through the formal processes.

For example, the HR Director and OH Manager in Trust East recollected being made aware of the NICE workplace guidance through the RCP audit:

OH Manager, Trust East

I didn't know its [the NICE workplace guidance] *existence until I did the* [RCP] *audit and then I printed it off.*

It was when the RCP requested the HR Director to participate in the audit, that the HR Director delegated the workplace guidance and audit completion responsibilities to the OH Manager.

In Trust Midlands, the owner of the NICE pro forma (the Assistant HR Director) stated that she became aware of the NICE workplace guidance through the RCP audit and an HWB conference attended by regional HWB 'champions'. The Assistant HR Director was not clear as to what event made her first aware of the NICE workplace guidance.

> Assistant HR Director, Trust Midlands
>
> *I had to go and find it* [the NICE workplace guidance]*, and the only reason why I found it was, or the only reason why I went looking for it was that somebody mentioned about 'had we seen what the NICE guidance had said about obesity?'.*

It was not entirely clear whether the NICE workplace guidance pro forma owner in Trust Metropolitan recollected the pro forma process. They did not mention the pro forma process and instead discussed the NICE workplace guidance in relation to the RCP audit.

The RCP audit took more time to complete than any of the Trusts' formal pro forma processes, and the RCP department employed a dedicated project manager for the audit who regularly contacted the participating Trusts on their progress with the audit, performing multiple follow-ups for non-responders. NICE did not and do not have this resource. Additionally, the RCP provided a report to each Trust participating in the audit detailing their results.

The HWB Coordinator in Trust East was referred to the NICE workplace guidance when they first started their position in the Trust; this happened to be around the time of the RCP audit. This occurred through informal interpersonal communication between the HWB Coordinator, the OH Manager and HR Director. The HR Director and OH Manager believed that the NICE workplace guidance could act as a reference document for the HWB Coordinator:

HWB Coordinator, Trust East

I wasn't officially asked to read through the whole thing and kind of memorise the whole thing, I'm just being sort of referred to different sections at various points and I will just see what NICE have to say about it.

The HWB Coordinator in Trust East did not disseminate the guidance further. However, the OH Manager made staff in the OH department aware of the NICE workplace guidance during a staff meeting because the OH department was going through an accreditation process for quality standards in occupational health six weeks prior to the interview for this project:

Moving and Handling Adviser, Trust East

The main component of the accreditation was all the nurses gathering evidence and information ... So it [the NICE workplace guidance] *wasn't emailed out for everybody to read and sign. It was more of an awareness that it was there.*

In Trust Metropolitan, informal communication occurred with the OH Director referring to the NICE workplace guidance in conversations:

Performance Manager, Trust Metropolitan

*I think [*the OH Director*] brought up the NICE guidance and the Boorman report in discussions. So then I've gone and kind of done my own research on the back of that ... [the OH Director] wasn't directing me to go and read it. It was just a kind of ... [*the OH Director*] was obviously talking about it in context of something. And I hadn't heard of it at the time, 'cause I was quite new when doing this.*

However, it should be noted that the OH Director did not actively disseminate the guidance in the form of sending it to somebody or telling somebody to read it, and that dissemination occurred through the Performance Manager researching the guidance to increase her own understanding.

5.8.2 Sub-theme: marketing

Interviewees in all three Trusts questioned the marketing strategy of the NICE workplace guidance, suggesting that NICE needed to 'think very carefully about its marketing strategy' (OH director, Trust Metropolitan). In particular, interviewees believed that NICE needed to distinguish the workplace guidance from its other guidance in order for the workplace guidance to be noticed:

OH Director, Trust Metropolitan

NICE has got a good reputation in terms of the quality of the work that it does. So maybe what NICE has to do is to use that aspect of its branding, but to produce a series of guidance with a different sort of marketing. So build on the strength of NICE, but portray the guidance in a much more meaningful way that will resonate with organisations rather than clinicians.

Deputy Chief Nurse, Trust East

There's so much that comes out of NICE, that they don't publicise the workplace guidance any more than they publicise any of the other clinical guidance that comes out, so probably it [the NICE workplace guidance] *has received less attention.*

Interviewees also believed that the publication of the NICE workplace guidance was overshadowed by the publicity of comparable innovations, and emphasised the role publicity had in raising awareness amongst the target audience:

OH Manager, Trust Midlands

Far more people will be able to tell you about [the Boorman Review] *than will be able to tell you about the NICE* [workplace] *guideline …* [the Boorman Review] *was out in the media a lot more; it was on the television, it was in newspapers, there was an awful lot more exposure than the NICE guidelines.*

Deputy Chief Nurse, Trust East

I think they [other similar workplace innovations] *probably had a lot more publicity than NICE has had ... I think some of the other initiatives with the awards and so on have perhaps been pushed very hard from HR and whether the NICE guidance is just because it's got nothing absolutely new and innovative in it has received less attention.*

Interviewees in all three Trusts suggested that NICE needed to have a better strategy towards their key target audience:

OH Manager, Trust East

I never received a copy of these [NICE workplace guidance]. *I am on the NICE communication* [email list], *so when the NICE guidance comes out they send me and most of them have nothing to do with me, so it's to make sure that the appropriate people get the information ... but I never got to see it so I didn't know its existence till I did the audit and then I printed it off.*

Clinical Governance Manager, Trust Midlands

NICE are known traditionally for clinical guidance. I think it's only in the last few years or so that they've started to expand into this kind of guidance. And I think maybe purposefully targeting, rather than it just blanket coming into an organisation, they should actively target the people who have got the (I wouldn't say the power), but who have got the means to implement it and make a change by contacting them outside of that framework. It's taking it to them through their other forums in HR and occupational health.

5.9 NICE interviews

The following are the results of interviews of five senior staff members at NICE. I conducted these interviews after having completed all the interviews with the Trusts. The exact job title of the interviewees has been anonymised; all the interviewees had experience in the development, dissemination and implementation of NICE guidance.

I asked a NICE interviewee about the balance between specificity and flexibility in the content of the NICE guidance and the recommendations, as these issues emerged both in the consultation responses for the NICE workplace guidance and the sub-theme of 'complexity' from the interviews. The following response was obtained:

> NICE senior staff member
>
> *It's something that people ask us about, in a way, about can we be more specific about things like service design. NICE have always steered away from that a little bit because it's quite difficult to say a particular type of intervention that may take place in a day centre in one location but delivered in an outpatient unit in another or an acute setting in another. We can't evaluate whether that's the most appropriate place to deliver that service. So we've always concentrated on the actual intervention itself rather than where it's provided or who provides it, assuming everybody's got their necessary competence etc.*

The above response is indicative of the responses in the NICE interviews inasmuch that there was an awareness of issues raised by the Trust interviewees but this was accompanied by a conscious or unconscious decision not to bridge the gap in demand. For example, interviewees in the Trusts often mentioned that case studies would help in the implementation of NICE guidance, and this was echoed by NICE:

> NICE senior staff member
>
> *The levers that help implementation a great deal are things like case studies. People love to see what other people have done and that makes it*

real for them. And I suppose that's a criticism that can be levelled at a lot of our guidance, it's very sort of, excuse me, academic so practical examples of actual application in the field are always well received.

What is particularly striking is that, despite acknowledging the importance of case studies, and despite responses in the consultation document also referencing the need for case studies, case studies are not included in the guidance documents themselves. The reason for this appears to be that the NICE strategy is to collect case studies post-hoc, as a tool for the implementation consultants, rather than as something that is collected in the form of best practice examples during the development of the NICE guidance to be included in the main document:

NICE senior staff member

*NICE themselves don't produce the case studies. We will produce the guidance and the recommendations within that guidance and then what we try to do is identify and collect examples of case studies as [*the implementation consultants*] go round. Admittedly, there have been very few that were submitted in that respect.*

The above point suggests in part why there was lack of diffusion of the NICE workplace guidance as the sub-theme 'compatibility' early on in this chapter and the NICE response to this sub-theme demonstrate that, though it is a recognised issue, the demands of stakeholders are not being met.

Another similarity between the interviews at NICE and that of the NHS Trusts was the perception that Trusts were already meeting the recommendations in the NICE workplace guidance:

NICE senior staff member

Some organisations had big programmes around smoking cessation or physical activity, even though they hadn't seen that NICE guidance. And so some of them were already doing quite a lot in those areas so although cost came up [as a barrier to implementing the workplace guidance]*, it wasn't a massive barrier. Every Trust pretty much had a smoking cessation programme; every Trust pretty much had a physical activity programme.*

NICE senior staff member

There's nothing really in our guidance in terms of the workplace that, I suppose, we wouldn't describe as common sense. Erm, people will know the drivers that are going to improve matters about giving up smoking, about using the stairs instead of the lift, about cycling to work. In a way it's been done to death. People are aware of all that.

Again, the above quotes are interesting because they highlight an awareness of existing problems discussed in the sub-theme 'task usefulness' yet do not indicate how NICE will overcome these perceptions to improve diffusion of their workplace guidance.

The 'linkage' themes that emerged from the Trusts were also explored in the NICE interviews. For example, one NICE interviewee defined the scope of NICE's remit narrowly, suggesting that 'product augmentation' – which was a sub-theme that emerged from the Trust interviews as important for the diffusion of innovation – was not something that NICE offered:

NICE senior staff member

Our role essentially stops having sent all of the relevant information to the Trust and how they deal with it once it gets there is entirely up to them.

However, the above view was contradicted somewhat by another NICE interviewee:

NICE senior staff member

Essentially, [the role of the implementation consultants] *is to act I suppose as what is being described as the human face of NICE in terms of maintaining and building relationships with organisations in our relevant regional groups. So that entails day-to-day contact with a range of organisations and individuals in both local government and in the health service quite often, and more often than not, at strategic level.*

Despite this apparent contradiction, it should be noted that the product augmentation service offered by NICE in the form of implementation consultants forms a small part of NICE's total offering, as

highlighted in the background chapter of this thesis. Even with implementation consultants offering

the product augmentation service, it targets the strategic level, whilst the interviews in the Trusts

made clear that the Trusts wanted product augmentation for the 'project implementer' level.

The fit of the NICE workplace guidance and the goals of the Trusts was also explored in the NICE

interviews:

> NICE senior staff member
>
> *One thing that they* [NHS Trusts] *did say was that often it's hard to get resources for this type of activity [*staff workplace HWB*] when they're fighting against other priorities. So it's seen as quite low down the Trust's list of priorities. They're competing against Trusts. They're competing against so many different things: clinical priorities, patient treatments, equipment, even things like buildings and estates. They're competing really for resources against so many different things and they all said, or a lot of them said* [staff] *needs are seen pretty much as down the bottom of the list of priorities.*

It was not clear from the NICE interviews how NICE intends to meet this problem. However, the

responses from the Trust suggested that this was a significant issue to the diffusion of the NICE

guidance. Indeed, the above quote only refers to the NICE guidance competing against issues within

Trusts, and does not discuss the NICE guidance competing with other similar workplace HWB

innovations – an issue that the sub-theme 'relative advantage' highlights as particularly pertinent.

The role mandates have in the diffusion of innovation was also acknowledged in the NICE interviews:

> NICE senior staff member
>
> *Also, I suppose the regulatory side as well. I don't know how much regulation there is around HR and occupational health and that stuff. From the patient perspective, obviously the Care Quality Commission come to look at services and they have to comply with NHSLA. There is so much regulatory levers that a Trust has to comply with, so they have to do some of those things whereas in staff absence and physical activity, I don't know what the real drivers are for a Trust to improve that, apart from ones that they kind of pick themselves.*

The sub-theme 'incentives' highlights the role incentives can have in lieu of mandates, and though NICE has the Shared Learning Awards, this was not mentioned as a tool or strategy that could be used to encourage Trusts to implement the workplace guidance.

NICE interviewees were aware that Trusts had a formal process for implementing and monitoring NICE guidance, but did not expect that process to have occurred for the workplace guidance because the HR department (which they believed should have received the workplace guidance) was outside the traditional network of the clinical governance manager. NICE therefore believed that this may have been a barrier to implementation.

> NICE senior staff member
>
> *They* [HR departments] *wouldn't necessarily go to NICE. It's not something they would be looking at routinely. They would just think that, if they knew what NICE was, they would just think that was for clinicians. So usually they wouldn't dream of looking at NICE guidance and I suppose it's only because if it's come up on occupational health newsletters or through that national audit* [RCP audit]*… I think that's the only way that they would know.*

The results from this study show that these formal processes did occur, although on two of the three occasions the guidance pro forma was delegated to the HR Manager, and the interviewees did not seem to recollect that they had seen the guidance through this method. In light of the quote above, it was suggested that NICE should perhaps have changed their marketing technique to accommodate a new audience:

> NICE senior staff member
>
> *I suppose we've got used to clinicians just picking that up whereas in the HR field, perhaps we needed to spend more time really alerting people to that and what it was, and how it could be useful for them, and what the benefits were.*

This has recently occurred, with the NICE communication strategy now disseminating NICE guidance and other communications to industry press and membership organisations; although this was not employed extensively at the time of the physical activity guidance, it did begin to be employed at the time of the mental wellbeing guidance.

5.10 Conclusion

The findings suggest that in all three Trusts, the NICE physical activity and mental wellbeing guidance made very little impact in terms of influencing strategies and initiatives for staff health and wellbeing. There was very little distinction between all three Trusts in terms of the level of implementation of the NICE workplace guidance. Apart from theme one, which highlights the structural differences between the Trusts, every other theme that emerged from the findings demonstrated similarities.

Whilst the three Trusts had formal processes for implementing NICE guidance, the senior managers involved with the NICE workplace guidance associated the guidance with the Royal College of Physicians audit (2011) and did not recollect that they had signed off the Trust's formal pro forma stating that the Trust had met the recommendations in the guidance. This linked to the finding that the NICE workplace guidance and the formal Trust processes for monitoring this guidance was merely a box-ticking exercise.

Part of the reason there was a lack of impact appears to have stemmed from interviewees' first impressions of the NICE workplace guidance. For example, the NICE workplace guidance was perceived to lack clarity, and interviewees typically wanted an indication of the steps to take with regard to implementation. In addition, interviewees believed the formatting and presentation of the NICE workplace guidance needed to be more attractive and that the marketing needed to be better targeted at key audiences (such as Human Resources (HR) and Occupational Health (OH)). Nevertheless, there was no real antipathy towards the NICE workplace guidance, though the findings clearly highlight that, with regard to the Trusts' staff HWB strategies and initiatives, the NICE physical

activity and mental wellbeing guidance were seen to have little added value or relative advantage when compared to existing workplace HWB innovations. This perception was shared at all levels of staff in all three Trusts.

Whilst NICE had a good reputation amongst interviewees, this tended to be in the domain of clinical and health technology guidelines, and the reputation of other organisations in workplace health seemed to supersede that of NICE in this area. This was closely linked to the perception from interviewees that the workplace guidance did not 'speak the language of employers'. Similarly, there was low compatibility between what senior managers and project implementers wanted (such as quantified examples, case studies and practical tips for implementation), and what was included in the NICE workplace guidance. Some of what senior managers were seeking in the guidance was included in NICE's implementation toolkit, which is separate from the main document. However, only one interviewee mentioned the implementation toolkit. The highest priorities for the Trusts were patient care and cost savings, and interviewees felt that it was not evident how the workplace guidance met these goals.

Despite being structurally different, all three Trusts reacted to incentives and mandates in similar ways. Trusts reacted positively to incentives, and sanctions and mandates strongly influenced the priorities of the Trusts and how the Trusts responded to innovations. An innovation linked to a sanction and mandate was given a higher priority than one that was not. This context links with interviewees commonly stating that there was a lack of time and resources to implement workplace HWB initiatives over and above what their Trust had already put in place, given the 'must-do' targets and policies that their Trust had to implement.

These findings may appear unsurprising given what is known in diffusion of innovation research. However, these findings also suggest that at the stage when the adopter accepts or rejects an innovation, the perceived characteristics of the innovation, the effectiveness of its marketing and the

outer context in which the innovation is placed are more predominant issues than the other components in the Greenhalgh et al (2004a) model.

The main reason I chose Trusts from the RCP audit was in order to select a mixture of high, medium and low performing Trusts with regard to the implementation of NICE workplace guidance. That my findings did not identify differences in levels of implementation raises an important issue. The lack of differentiation in implementation, despite differentiation in the RCP audit, suggests that the audit was not effective at discriminating between Trusts with regard to the implementation of NICE workplace guidance. Reading the RCP audit tool (Appendix C) alongside my findings suggests that Trusts did not see the RCP audit as an audit of NICE workplace guidance implementation but rather as an audit of the general workplace HWB policies and initiatives. Whilst differences in implementation of general workplace HWB policies may or may not have accounted for differences in performance in the RCP audit, my focus on the implementation of the NICE workplace guidance as an innovation suggests that these apparent differences might not relate to the level of implementation of NICE workplace guidance as an innovation.

6. Discussion

6.1 Introduction

According to their respective pro formas and despite their de facto rejection of the NICE guidance, all three Trusts formally met the recommendations in the guidance. Through conducting semi-structured interviews with a range of staff at different levels, I was able to examine to what extent, if at all, this formal implementation had resulted in actual diffusion of NICE workplace guidance. Using my conceptual framework and methods, rather than traditional audit methods such as the those of the RCP, or surveys as suggested by Cook et al (2012), allowed me to identify box-ticking which might not have been picked up using other methods.

The value of my study is both in the practical aspects concerning the implementation of NICE public health workplace guidance and in the academic aspects by elaborating on the Greenhalgh et al model. Unless otherwise stated, my discussion in this chapter relates to both pieces of NICE workplace guidance. Whilst I explored the implementation of the NICE physical activity and NICE mental wellbeing guidance, the small impact meant that little data emerged to highlight any discernible difference in the dissemination and implementation of the two pieces of guidance. This is linked to an important caveat with relation to my findings: none of the three Trusts saw the NICE workplace guidance as innovative, and none of the three Trusts made organisational changes with relation to the guidance. Using the Greenhalgh et al model – intended to explore the diffusion of an innovation – in a context where little innovation and implementation took place, poses a limitation on my discussion with regards to the model itself, since the model was not able to be fully explored due to lack of data that would have been relevant to many of its aspects.

I have divided this chapter into four main sections. In the first section I discuss what my findings mean in relation to the literature, examining each theme in turn. In addition, I discuss what my findings mean to the literature on guideline implementation, and the importance of context in the diffusion of

innovation. In the second section I discuss the findings in relation to my conceptual framework, looking at the complexity and comprehensiveness of the framework as well as the implications of my findings. In the third section I discuss the implications of my findings to the work of NICE, particularly with regards to their fieldwork reports and stakeholder consultation. In the fourth section, I reflect on my study design and methods, from the choice of guidance and Trusts to the conducting and coding of the interviews.

I ultimately argue that the NICE workplace guidance made very little impact in my case studies. Whilst constructs emerged from the inner context, the most likely reason for such low impact was that the characteristics of the innovation did not meet the needs and demands of its target audience. The guidance was seen as lacking clarity, and lacking information needed to make business decisions – such as case studies and cost metrics. The NICE guidance was also perceived to have little relative advantage compared to similar innovations, and because interviewees did not see any incentives or mandates being attached to implementing the NICE workplace guidance, limitations in the NICE guidance were not mitigated.

My findings add to the accumulation of knowledge across study contexts, and may help researchers understand more about what works where and why in terms both of the knowledge of NICE workplace guidance and of the use of the Greenhalgh et al model (Damschroder et al, 2009).

6.2 Discussion of findings in relation to the literature

6.2.1 Theme 1 - the inner context (system antecedents); structure and slack resources

The findings suggest that the 'inner context' did not appear to greatly influence the diffusion of the NICE workplace guidance. This is interesting because the 'inner context' is the largest construct in the Greenhalgh et al model (by number of sub-constructs). One potential explanation is that structural determinants of innovativeness, such as size, formalisation, differentiation and decentralisation, may be more influential at the stage when an organisation attempts to implement an innovation. Because

the guidance did not get past the acceptance/rejection phase, many of the sub-constructs in the 'inner context' did not manifest. A counter argument to this claim is that structural determinants may influence whether an organisation accepts or rejects an innovation in the first place. However, all three Trusts in my research were organisationally different yet reacted to the innovation in similar ways, suggesting that at the early stages of the diffusion of an innovation, structural determinants may not play a major influencing role. As highlighted in the introduction to this chapter, the lack of data and implementation of the NICE guidance adds an important caveat to this suggestion, and more research is required with innovations that have gone through later stages of implementation.

One of the inner context sub-constructs that emerged from the findings was 'slack resources' in the form of lack of time, financial resources and personnel. Though my case study Trusts had differing priorities, structural and human resources, interviewees in all three Trusts commonly stated that their organisation was financially constrained and was not able to dedicate time to non-essential tasks. It should be noted that my interviews took place at a time of financial constraint for the NHS (Department of Health, 2009; Hurst and Williams, 2012), and there may have been recall bias in interview responses. The economic and NHS environment at the time the NICE guidance was published may have been different, but interviewees may have placed their answers in the context of the fiscal climate at the time of the interviews. However, despite the possibility of recall bias, it was not clear whether such bias materialised. Specifically, it was not clear whether the priorities of the Trusts were different at the time the NICE guidance was published compared to the time the interviews took place and whether such a difference would have affected the use of slack resources. Given this lack of clarity, I decided to take the interview remarks at face value.

The issue of slack resources has been widely studied as a determinant of organisational innovativeness (Greenhalgh et al, 2004a). For example, both Damanpour (1991) and Nystrom et al (2002) found that there was significant positive association between slack resources and organisational innovativeness. Nystrom et al defined 'organisational slack' as a composite of financial resources, skilled labour,

managerial talent, and the extent to which funds are committed to capital projects (Nystrom et al, 2002). In developing measures of the constructs in Greenhalgh et al's model, Cook et al suggest using staff to patient ratios and programme capacity (such as number of unique patients or number of unique visits) to measure slack resources. Such quantitative measures of slack resources typically rely on counts of specific variables and on organisations having full and accessible data for these variables (Cook et al, 2012). However, the perception of availability of slack resources is equally important to capture. Through using qualitative methods, my findings suggest that the perception of 'lack of time' influenced whether the NICE workplace guidance was initially looked at and read in the Trusts. Whilst 'time' may be quantitatively measured – for example, the percentage of a person's role that is formally dedicated to a certain task, it is their perception of the time they have which may dictate their behaviour. It is important to note that 'time' is not a component of Greenhalgh et al's definition of slack resources. Nevertheless, this conceptual addition needs to be explored in future studies as 'time' is a limited resource which my findings suggest may influence the diffusion of innovations.

Another point that may need to be explored in future studies is the extent to which 'slack resources' is a proxy for other factors influencing the diffusion of innovations. For example, some interviewees in my research believed that the guidance was too long and stated that they did not have the time to read the whole document. 'Lack of time' may have therefore been a proxy for a perceived length of the guidance: if the guidance was perceived to have been short, interviewees may not have said that they did not have the time to read the guidance. A perceived lack of time may have also been a proxy for how essential the workplace guidance was perceived to be to a person's specific job role. For example, some interviewees stated that they lacked the time to read the NICE workplace guidance yet they read other guidelines from NICE that were of equal length. In this situation, it was not the length of the guidance for which lack of time was a proxy, but rather the perception that the NICE workplace guidance was not essential to their day-to-day tasks and therefore of low priority. Interviewees who had specific responsibilities for staff HWB did not mention they lacked time to read

the guidance. Ultimately, the perception of having 'lack of time' to read the workplace guidance may be the result of the interplay between the perceived length and complexity of the guidance with the perceived usefulness and priority of the guidance to the job role.

6.2.2 Theme 2 - the outer context; incentives and mandates

Incentives can take many forms such as awards (monetary or in-kind), prestige (such as being accredited to deliver a particular service) or peer competition (Custers et al, 2008). Mandates linked to sanctions are equally varied, and can include monetary sanctions, loss of status or in the most severe cases can result in custodial sentences (CQC, 2015b). Incentives and sanctions can be used in tandem to influence the actions of individuals or organisations (Riley, 2003). Generally, sanctions act to force organisations to implement policies which the sanctioning organisations perceive as 'must-do', or to ensure organisations avoid 'don't do's' (Greenhalgh et al, 2004a). Alternatively, incentives are used to encourage the implementation of innovations or policies that do not fall into the 'must do' category, or can also be used to discourage certain actions (Custers et al, 2008).

Despite their structural, geographical and human-resource differences, all three Trusts were motivated by awards and incentives, and this echoes findings from the literature (Custers et al, 2008). However, as previous literature also suggests is likely to be the case, the Trusts were not motivated by the same incentives (Custers et al, 2008). For example, Trust East sought to gain an award offered by a local organisation for Trusts with the best HWB initiatives, while Trust Metropolitan was influenced and attracted by entering the Good Corporate Citizenship awards. Whilst this may have been because the Trusts had different levels of awareness of available incentives, the characteristics of incentives (e.g. the size of monetary award) may have had different levels of appeal to the different Trusts because of the organisational attributes of the Trusts themselves (e.g. their goals or level of slack resources).

In addition to being motivated by incentives, the main priorities for all three Trusts were implementing policies to avoid sanctions and to meet mandates, such as health and safety regulations. However, whist all three Trusts focused their attention on policies that avoided sanctions, it was unclear whether or why certain sanctions were given different priority levels by the Trusts.

Whilst mandates can help ensure that innovations are seen by the desired target audience, they cannot guarantee that an innovation is implemented or sustained (Luck et al, 2009). Mandates can lead to improved awareness because the target audience is impelled to be aware of the mandate and carry the request forward. However, mandates by themselves do not necessarily result in a move from increased awareness to implementation. Indeed, even process mandates (like checklists that are sanctioned if an action is not carried out) do not necessarily lead to routinisation or embeddedness. For example, as I have described earlier, the CQC mandates for Trusts to monitor the process of implementing NICE guidelines led to box ticking rather than the implementation of all guidelines. For box-ticking to turn into 'meaningful' implementation, mandates need to be accompanied by other factors like dedicated funding as well as meet other criteria that evidence suggests effectively leads to the diffusion of an innovation (Tomm-Bonde et al, 2013; Greenhalgh et al, 2004a).

My findings showed that 'incentives and mandates' were linked to the sub-construct of 'relative advantage' (in theme 3) in important ways. Interviewees did not identify any incentives emanating from NICE to implement the workplace guidance. This contrasts with other findings that showed that if innovations are attached to national policy priorities, it makes the diffusion of those innovations more likely (Fitzgerald et al, 2002). Despite both pieces of NICE guidance including references to the national policy priorities to which they were related, and despite the Boorman Review recommending the implementation of the NICE mental wellbeing guidance, those national policy priorities did not appear to influence the diffusion of the NICE guidance. This may be because there were other similar innovations that the Trusts were using that equally met those policy priorities (such as the HSE stress

management recommendations). Additionally, despite indirect incentive models such as public reporting and recognition (Custers et al, 2008), NICE's 'Shared Learning Awards' – which aim to incentivise Trusts to implement NICE guidance by giving an award to the 'best' submitted case study of implementation (NICE, 2015l) – did not appear to provide any incentives for Trusts to implement their workplace guidance. Whilst this was probably due to lack of awareness of the Shared Learning Awards, it suggests a missed opportunity on behalf of NICE to leverage such incentives and ensure that its stakeholders are aware of these opportunities.

The external workplace HWB innovations that the case study Trusts implemented appeared to all be linked to incentives such as awards, accredited status, peer competition and peer recognition. Indeed, the RCP audits were more successful than NICE itself at raising awareness of the NICE workplace guidance amongst my case study Trusts. I argue that one of the reasons for this success, and the relative advantage the RCP audits had over NICE, was that they were effective at engendering peer competition and recognition. This explanation has roots in diffusion of innovations research, with evidence showing that pride in public image can motivate change in healthcare organisations (Custers et al, 2008). By allowing Trusts to audit their workplace HWB policies and comparing these results to the audit findings (albeit in anonymised form), the RCP audits provided Trusts with a status in workplace HWB. Nevertheless, it should also be stated that incentives may run the risk of 'gaming', 'where participants find ways to maximize measured results without actually accomplishing the desired objectives' (Custers et al, p.7), and this appears to have occurred with the 'box ticking' in the RCP audits.

The findings that emerged from this theme raise two important considerations for future diffusion of innovation research. Firstly, the perception that an innovation lacks incentives and sanctions may modify the influence of other constructs in terms of diffusion of innovations. For example, incentives and sanctions may act as levers that mitigate perceived limitations in an innovation or enhance perceived advantages. Without such mitigation, negatively perceived innovation attributes (e.g. the

ease of use) may have a greater effect in slowing or stopping the diffusion of an innovation. Secondly, it is important to frame sanctions and mandates as an opportunity cost. Sanctions and incentives for other innovations may indirectly influence the implementation of an innovation by virtue of being 'stronger' by comparison. For example, if a Trust has limited resource to implement one innovation, the innovation with the strongest sanction or greatest incentive may take precedence. These issues will need to be explored in future research.

Greenhalgh et al do not discuss incentives and mandates in great detail, particularly in terms of how incentives and mandates interact with other constructs to influence organisations or individuals, but future research may benefit from conceptualising incentives and mandates as 'innovations' and applying the Greenhalgh et al model to how and why such innovations influence organisations differently. For example, Custers et al (2008) argue that for incentives to influence change they must be linked to performance objectives and reflect values and goals. This would fit with the 'compatibility' construct in the Greenhalgh et al model. Additionally, Custers et al (2008) argue that effective incentives would require facilitation, tools and information, and technical assistance. This would fit with the 'linkage' construct in the Greenhalgh et al model.

6.2.3 Theme 3 – the innovation

My personal view prior to conducting my interviews was that there was a rational case for implementing the NICE workplace guidance due to its evidence-based nature. During the interviews, I minimised this bias by adopting neutral language for my questions. My decision to maintain a neutral stance during the interviews was vindicated by the interview findings, which highlighted deep reservations about the NICE workplace guidance as a product. A number of authors have demonstrated that the perception people have of a guideline can influence whether it is implemented (Cullum et al, 2004; Gagliardi et al, 2011; Sandstrom et al, 2015). However, whilst the strength of evidence is a strong factor in the implementation of clinical guidelines, my findings suggest that, for a

non-clinical target audience of predominantly organisational guidance, other attributes may be of greater importance. The Greenhalgh et al model facilitated my exploration of other guidance attributes that can influence the implementation of the guidance, such as relative advantage. The findings from theme 3 are important because it is the 'attributes of innovations as perceived by prospective adopters that explain a high proportion of the variance in adoption rates of innovations' (Greenhalgh et al, 2004a, p.12).

Complexity

Interviewees discussed the complexity of the inherent attributes of the NICE guidance. The negative influence of the perceived complexity of an innovation is well documented in both the diffusion of innovations literature and the literature on the implementation of guidelines (Greenhalgh et al, 2004a). For example, Rogers (1995) argues that the complexity of an innovation (which he defines as the difficulty in understanding an innovation) influences the rate and extent of its adoption, whilst Gagliardi et al (2011) argue that the usability of guidelines, such as presentation and formatting, are important factors that facilitate the implementation of clinical guidelines.

It was clear from interviewees that the NICE workplace guidance had relative disadvantage when compared to other workplace health promotion documents, such as those published by Business in the Community (Business in the Community, 2015). However, what is unclear is why perceived complexity and lack of clarity did not emerge as strongly from NICE's stakeholder consultations or fieldwork exercises (discussed in section 6.4). More research may be needed in this regard, given the importance of complexity on the diffusion of innovation.

Compatibility and task relevance

Whilst both the NICE physical activity in the workplace guidance and the NICE mental wellbeing in the workplace guidance state that implementation of their recommendations can help employers of all sizes meet their legal duties of care and lead to business benefits, NHS organisations were mentioned

in the guidance in their capacity of delivering public health services rather than as an employer (NICE, 2009a). Furthermore, both pieces of guidance, whilst linking to implementation tools on their website, did not have best practice examples, figures, or discussions of the factors that can facilitate or hinder implementation. It was therefore clear that the NICE workplace guidance lacked compatibility with the needs of the employer.

My multi-level approach was effective at identifying the varying perspectives of key actors in the multiple levels. For example, interviewing multiple levels highlighted that project managers thought the NICE workplace guidance was too policy-orientated and impractical, whilst senior managers believed the guidance was incompatible with their responsibilities for making cost-benefit spending decisions. These differing views culminated in a single theme – lack of compatibility – but the nuance is important to emphasise. This is because it has implications for the way guidance is disseminated and put into practice. As I argue in more detail in theme 7 (section 6.2.7), the needs and perspectives of different levels require understanding through market research in order to effectively target the desired audience. Whilst I did not use the multi-level approach suggested by Drazin et al (1999), it would nonetheless be useful to explore how different analytical levels interact with innovation. For example, understanding how an analytical level 'health and wellbeing enthusiast' reacts to the workplace guidance compared to an analytical level 'commercially focused' might have implications for how the guidance is marketed. Whether the chosen levels are analytical or based on echelons, identifying levels and understanding their perspectives are necessary steps to ensuring that the guidance is compatible with their needs. As with the issue of complexity, there has been extensive research on the issue of an innovation's compatibility with an organisation (Greenhalgh et al, 2004a). For example, studies by Moore and Benbasat (1991) and Rogers (1995) found that an innovation's compatibility with the existing practices and values of implementers was an important determinant of innovativeness. Additionally, Foy et al (2002) and Cullum et al (2004) found that guideline recommendations that were compatible with the values of physicians were more likely to be

implemented than recommendations that were not compatible with those values. However, one of the potential errors in using a model with comprehensive constructs, such as the Greenhalgh et al model, is to view the model as definitive because of such comprehensiveness. The theme of 'compatibility' is an example where I may have erroneously forced my findings to fit the constructs in the Greenhalgh et al model, rather than allow new constructs to emerge from the research data. Instead of using the 'compatibility' construct, I might have used terms such as 'speaking the language of employers' or 'engaging with target audience'. This suggests that the use of the Greenhalgh et al model shaped and influenced my interpretation of my findings, to think in terms of the constructs in the model, rather than the language used by the interview participants.

Relative advantage (below), compatibility and complexity are attributes of innovations which Rogers (1995) argues influence their rate and extent of adoption. These attributes came out strongly in my findings, but represent only half of the attributes Rogers argues influence adoption. The other attributes of innovations are trialability (when the innovation is experimented with in a limited way), observability (the extent to which the results of an innovation are visible to others), and reinvention (the change or modification of the innovation during the process of implementation). The reason these attributes did not emerge in my findings might be because they influence adoption and implementation at later stages when issues of experimentation, results and modification become more pertinent. The NICE workplace guidance was rejected by the Trusts before experimentation and modification was considered, and before results could be observed. This does not mean that attributes of innovations are considered in a linear sequence. Instead, the findings suggest that groups of attributes are more influential than other groups, depending on the stages of adoption and implementation. It may very well be that trialability, observability and reinvention are also considered in the early stages of adoption (though not in these case studies), but it may equally be that their influence on whether an organisation adopts and implements the innovation are not as strong as the other attributes at those early stages.

Relative advantage

The importance of the relative advantage of an innovation to its successful implementation has been well documented in the literature (Greenhalgh et al, 2004a). Damschroder and Lowery argued that the advantage an innovation has over the status quo or similar innovations is 'an important antecedent to set the stage for successful implementation' (2013, p.14).

My findings suggested that there was interconnectedness between the needs of stakeholders and the perceived relative advantage of the guidance compared to other products. Interviewees framed innovations as competing against each other for their limited resources (time, attention and money), but it is unclear whether the NICE guidance was retrospectively compared to the 'competition'. It can be argued that because interviewees retrospectively stated that the innovation they used better matched their needs, it is a case of confirmation bias. The innovation attributes described as important by interviewees were found in the innovations they used and not in the NICE workplace guidance, but as the attributes were commonly mentioned by interviewees across all three Trusts and by those using different innovations, it is less likely that these attributes were a post hoc justification for not using the NICE guidance, and more likely that there are attributes they look for in innovations.

One of the 'competitors' that was often referred to by interviewees – particularly senior managers and occupational health clinicians – was the Boorman Review (2009a). Though I did not undertake a formal comparison of the Boorman Review, it was evident from the interviewee responses that it contained the attributes interviewees mentioned as missing from the NICE workplace guidance: case studies, images, figures, and implementation examples. Indeed, interviewees believed the Boorman Review made a good case for investing in staff HWB and sickness absence reduction. In doing so, the Boorman Review had relative advantage over the NICE workplace guidance by being compatible with the needs of senior managers.

It was clear from the interviews that the NICE guidance was compared to similar innovations. This suggests that an innovation should not be explored or researched in isolation from other innovations, as adoption decisions are influenced not only by the innovation itself (and organisational determinants), but also by how these factors relate to other innovations. It was not possible to ascertain from the interviews whether NICE was aware of other similar innovations, or whether it had conducted market research on the user satisfaction of products similar to the NICE guidance.

If there are competing innovations and NICE cannot provide a product that its target audience perceives as being advantageous to implement over other innovations, questions may need to be asked as to whether the money spent developing and disseminating the guidance will produce the necessary impact and added value that would warrant such an investment. NICE should not only have to provide a rational cost-benefit case, it should also be able to convince its target audience that its innovation is a better use of their limited time, attention and resources than the innovations its target audience is either using or considering using. Ultimately, the findings suggest that the NICE guidance failed to make an impact because it fell at the first hurdle, and this corroborates diffusion of innovation research: 'the finding that attributes of innovations are evaluated sequentially rather than concurrently (specifically, that innovations without any perceived advantage may not be evaluated further) is also important and is supported by empirical studies from the wider literature' (Greenhalgh et al, 2004a, p.115).

6.2.4 Theme 4 – linkage

My findings show that, though NICE was seen as a credible and trustworthy organisation, the overall credibility of NICE did not add perceived value to its workplace guidance. The disconnect between NICE's overall credibility and its credibility in a specific area (workplace HWB) may have been mitigated. For example, Meyers et al (1999) argued that 'technical capability' (the capacity and skills of the change agency to 'install' an innovation in a range of settings), strong communication skills and

project management expertise were features which consistently helped 'the seller' influence implementation in 'the buyer'.

It was not clear from the interviews with the Trusts that NICE had the technical capability, communication skills and project management expertise that might have helped mitigate lack of credibility in workplace HWB. NICE had only eight 'change agents' (which they referred to as implementation consultants) working in the domain of these sub-constructs. Even if NICE had the resource for the required expertise, the interviews clearly demonstrated that these resources were not enough for all NICE guidelines and for all relevant stakeholders in NHS Trusts. A process is required to engage individuals in the process of adapting an innovation to fit organisational settings, since adaptation is key to its successful implementation. This is particularly so with complex innovations which typically enter into an organisation as 'poor fit' and resisted by individuals (Damschroder et al, 2009). NICE's limited capacity to fully engage with its target audience is important to note because it can affect the implementation of its guidance.

Greenhalgh et al argue that the findings from Meyers et al should be treated with caution because 'health care organisations do not see themselves in a buyer-seller relationship with the developers of innovations (the guideline "industry", for example, is a case in point)' (Greenhalgh et al, 2004a, p.40). However, my findings suggested that Trusts do appear to see themselves in a buyer-seller relationship, because the adoption of the NICE guidance was voluntary and there were similar alternatives available. This meant that for the workplace guidance, Trusts acted more like customers who had a number of products from which to choose. Such a situation may not have been acknowledged in the Greenhalgh et al review because traditionally guidelines in the health sector (such as those of NICE) are based on a relationship where Trusts are de facto mandated by a regulatory body to implement an evidence-based clinical or health technology guideline.

In light of this, a limitation of both the Greenhalgh et al review and of the scope of my own research is the exclusion of business literature. This literature base may have more research on the customer-

seller relationship and may need to be included in future diffusion of innovation research, particularly when the innovation is not mandated.

6.2.5 Theme 5 - the inner context (system readiness); fit with system and its goals and dedicated resources

Whilst only one sub-construct from this theme emerged from the interviews, it was of fundamental importance for the lack of diffusion of the NICE workplace guidance. The NICE workplace guidance did not meet organisational goals of cost-cutting and patient care, and because the Trusts were already implementing staff HWB initiatives there was no 'felt need' for the guidance. Even amongst interviewees that had positive perceptions of NICE, there was no real demand or 'user pull' for the guidance. This is important to note. At the time of the development of the physical activity in the workplace and mental wellbeing in the workplace guidance NICE received the topics for which guidelines to develop from the Secretary of State and the Department of Health (NICE, 2009a; 2008a). This process has now changed in that topics are now chosen from a library of topics and agreed with NHS England, the Department of Health, Public Health England or the Department for Education (NICE, 2014b). However, whilst NICE states that topics are selected according to national priorities and refined by the demands of stakeholders such as commissioners (NICE, 2014b), national priorities and demands of national commissioners may be different from the organisational priorities and demands of the target audience of the guidance. Cullum et al (2004) state that the NICE guidance comes from a perception of need. My findings showed that there was no felt need, and without demand from the very users who are meant to implement and adopt the NICE guidance, it is questionable whether the guidance would be accepted.

As with theme 4, a limitation of the diffusion of innovation literature and of the scope of my own research is the exclusion of business literature. The business literature may have a longer and more direct history studying consumer demand, which is not clearly evident in the diffusion of innovation literature (Greenhalgh et al, 2004a).   Another limitation that this theme highlights is the influence *a*

priori codes can have in the interpretation of findings. For example, I put the findings discussed in this theme under 'fit with system and its goals', which may have constrained my language and not given me the flexibility to interpret the data in terms of 'user demand'. However, one advantage of going through this process is that through the process of analysis, contemplation and reflexivity, amendments can be suggested to original models and constructs. Nevertheless, my experience in using the Greenhalgh et al model suggests that a degree of flexibility needs to be exercised when using conceptual models, otherwise the model may constrain the interpretation of findings.

6.2.6 Theme 6 - adoption; initial awareness and implementation

Diffusion of innovation theory generally states that, in the early stages of diffusion, the intended recipient of an innovation formally or informally decides whether to accept the innovation (and implement it) or to reject the innovation (Greenhalgh et al, 2004a). Whilst this acceptance/rejection phase may not be a binary decision or a single point in time, it is a stage that an innovation must pass in order to be implemented. One of the interesting things about my findings was that all three case studies formally accepted the innovation and at the same time de facto rejected it, all in similar ways.

This suggests that the process for implementing the NICE workplace guidance was a 'tick-box exercise', where implementation occurs at the minimum level required to complete a task. For example, Trusts may 'tick the box' relating to a flexible working recommendation by having codified flexible working policies in place while not actually allowing staff to benefit from the policy in reality. Helfrich et al (2010) argue that one of the weaknesses of the PARIHS framework and of implementation science in general is the lack of consensus on the conceptual definition of what 'successful implementation' looks like. The authors point towards management literature, which makes a conceptual differentiation between effective implementation and 'compliance' which is implementation that is either incomplete or likely to degrade. As I argue in this chapter, the Greenhalgh et al model also requires conceptual distinction between effective implementation and 'box-ticking'. Such an argument

contradicts Damschroder et al's (2009) assertion that processes of implementation are all intent on moving in the same general direction: effective implementation. My findings show implementation may not be accurately described as Damschroder et al (2009) intended, as it can come in the form of box-ticking. Whilst box-ticking may be a form of implementation, it is superficial in nature and done to meet externally derived mandates.

A potential reason for the Trusts ticking the boxes concerning the implementation of the guidance rather than rejecting the guidance outright may be the combined factors of CQC mandates and the flexible and voluntary nature of implementing NICE workplace guidance. As I outlined in the background chapter, the CQC requires all Trusts to have a formal process of monitoring the implementation of NICE guidance (CQC, 2015a). Whilst this mandate is linked to sanctions, it is directed towards the process of monitoring implementation rather than towards implementation itself. Box-ticking may therefore have occurred because Trusts were required to demonstrate that they had completed pro formas without being required to demonstrate that they had actually implemented the NICE workplace guidance. Box-ticking may also have been compounded by the flexibility afforded by the NICE workplace guidance recommendations. This is because flexible recommendations made it relatively easy for the Trusts to demonstrate that they were meeting the guidance. Such a situation has already been discussed in diffusion of innovation literature. A qualitative study by Exworthy et al (2003) concerning local healthcare policymaking found that local uptake of a national government policy was actually a rebranding of existing initiatives to fit the new central policy. If recommendations or policies are flexible, vague or offer enough room for manoeuvrability, organisations may state that implementation has been achieved when all that occurred was that existing policies were fitted post hoc onto new recommendations. Indeed, rebranding of organisational initiatives is sometimes not even needed. All three of my case study sites had flexible working policies prior to the publication of the NICE mental wellbeing guidance.

My findings suggested that the CQC mandate for Trusts to have a process to monitor the implementation of NICE guidance may not be an effective mechanism in and of itself at promoting diffusion of certain pieces of NICE guidance in NHS organisations. Additionally, comparing my findings with the results of the RCP audits suggests that audit methods may be ineffective at ascertaining whether implementation is merely rebranding or box-ticking. Whilst the Greenhalgh et al model, in conjunction with qualitative interviews, appears to have been effective at uncovering the extent and depth of diffusion of the NICE guidance, the model may require a sub-construct in the 'adoption' construct that more explicitly encompasses the issues I have discussed in this section.

Whilst the RCP audits may not have effectively discriminated between box-ticking and more in-depth implementation, it can be argued that the participation in the audit by NHS Trusts signifies that the diffusion of the NICE workplace guidance did take place. Audits take up resources, and require commitment and buy-in from stakeholders. Additionally, because the RCP audits were voluntary, participation in them by the Trusts suggests potential enthusiasm about auditing the NICE workplace guidance. The Trust's participation in the RCP audits may reaffirm the importance of the issues and themes discussed in this chapter: the audits may have had greater compatibility with senior managers (the audits facilitated quantifiable measurements), focused communication on a narrow target audience, may have had relative advantage over competing innovations (there were no other audits of this kind) and incentives (through peer competition and prestige). Exploration of the audits using the Greenhalgh model would complement findings from my research.

6.2.7 Theme 7 - communication and influence; informal communication and marketing

My findings suggested that perceived lack of effective communication was an important reason for the lack of diffusion of the NICE guidance. It is important to note that NICE used the same format template for their clinical and health technology guidelines (aimed at clinicians) as they did for their workplace guidelines (aimed at employers such as HR professionals), even though the audience is

different. NICE did not specifically seek any comments in the consultation documents on whether the workplace guidance was appropriately communicated and formatted for this new audience or whether it was clear and easy to use. NICE may wish to consider whether that template is suitable for all its target audience, particularly since its target audience has expanded beyond the original clinical sphere. The results also showed that the perception by the target audience that a document was attractively formatted can be the difference between the target audience taking the time to read it and the target audience putting it aside. This links closely with the 'lack of time' discussed in theme 1.

As well as formatting, the branding of the guidance emerged as an important factor in raising awareness of the guidance, and ensuring that it was seen as relevant by the target audience. As was intimated in theme 4, the results suggest that NICE's good reputation as a clinical guideline body may have been a hindrance when disseminating to a non-clinical target audience. The workplace guidance did not differentiate itself from the clinical and health technology guidelines in terms of visuals, formatting and method of communication, which may have given the impression to its non-clinical target audience that the guidance was not applicable to them. My findings suggest that the link between the branding of an innovation and the historical reputation of the innovator may influence the diffusion of innovation.

Whilst I argue that a major reason for a lack of dissemination of the NICE workplace guidance within the Trusts was that the guidance itself was not seen as useful enough to disseminate, the findings also suggest that NICE's top-down dissemination strategy was another reason for poor dissemination within Trusts. Instead of targeting staff who would be responsible for project implementation, NICE targeted senior management and board level. For example, its implementation consultants would generally visit Trust Boards rather than junior staff or middle management, and its guidance was seen as policy-orientated by project implementers. My research showed that the NICE guidance entered all three Trusts via the Clinical Governance Managers, who then disseminated the guidance to senior

OH or HR staff members. It is at this point where NICE's strategy would rely on this person to decide on where to disseminate the guidance within their organisation. This has repercussions for the diffusion of innovation research because there has not been research as to the difference that the entry point of an innovation into an organisation makes in terms of dissemination.

The multi-level approach I adopted for my methods allowed me to appreciate the individual-level differences in the target audience. Interviewing the different levels of staff clarified that NICE was not able to tailor messages in one piece of guidance to different segments of a wide target audience, and this resulted in low compatibility with user needs and requirements. Whilst the quick reference guidance was aimed at reaching project implementers, by giving project implementers the quick reference guide to look at during the interview I was able to ascertain that the same problems existed in terms of poor targeting of communication.

NICE stated that they target regional and national organisations (although this strategy may not have been employed at the time the physical activity and mental wellbeing pieces of guidance were published), as well as trade and employer groups as a strategy for disseminating to NHS Trusts. If such organisations used the NICE guidance as a starting point for their own innovations and guidelines, and if in turn NHS Trusts implemented those innovations and guidelines, one might be able to argue that the NICE guidance was indeed disseminated and implemented, just not in its direct product form. Further research would need to be undertaken to examine whether this is so, and how effective it is. However, relying solely on dissemination from other organisations might not be an effective strategy since responsibility for accurate dissemination and interpretation of the guidance would rest with those organisations. The NICE communication strategy may therefore still need improvement. This is particularly the case with regards to marketing and market research.

As I argue later in this chapter (section 6.4), NICE did not effectively identify nor act upon the needs of its target audience, despite fieldwork research and stakeholder consultations. Market research is more than stakeholder consultation because the aim is not only to gather views about a product,

service, or policy, but to also identify the needs of a target audience and match those needs with products or services (Rogers, 1995). Market research therefore tends to occur before decisions are made, for example before the development of a product or service, or the development of a strategy for the product or service (Deshpande and Zaltman, 1982). Whilst the NICE workplace guidance stakeholder consultation occurred before the dissemination of the guidance, the consultation occurred after a draft guidance was already developed. This meant that a decision to develop the guidance was made before ascertaining market need, existing market competition, and the characteristics of the target audience.

The importance of segmenting a target audience to better understand and target their needs has been espoused by Rogers (1995). Rogers argued that there are different adopter characteristics, and market segmentation is needed to identify these characteristics and tailor the dissemination and implementation strategies accordingly. For example, innovators and early adopters are more risk taking and information-seeking; Rogers recommends appealing to this group by highlighting the credibility of the science or evidence behind the innovation. Conversely, Rogers argues that the 'late majority' is more reticent towards science and objective evidence and therefore requires information through peer and interpersonal networks (1995).

Whether or not the adopter characteristics argued by Rogers are over-generalisations, the use of market segmentation has been highly influential, especially with regards to health promotion. Market segmentation has long been a staple of health promotion literature and practice, and can be done on any number of variables, including demographics, behaviours (e.g. frequency of smoking, drinking, or exercise) and psychological characteristics (e.g. the readiness to change behaviour). If the goal is organisational change, as was the case for the NICE workplace guidance, segmentation can be done by sector (e.g. educational, health, industrial), location (urban, rural), size, and other variables like types of policies or level of innovativeness (Greenhalgh et al, 2004a).

Health promotion research focuses on the idea of social marketing to instigate behavioural change, which amongst other components includes an 'orientation to realise organisational goals…research in audience analysis and segmentation strategies, the use of formative research in product or message design and the pretesting of these materials [and] an analysis of distribution (or communication) channels' (Lefebvre and Flora, 1988; p.301). Social marketing has been successfully used in several campaigns, including contraception, smoking, breast-feeding and cot death. The most important element in successful social marketing is 'client orientation: understanding the needs, preferences, perspective and concerns of the intended user' (Greenhalgh et al, 204a; p.78).

My findings suggest that there was a fundamental lack of understanding on the part of NICE with regards to the needs of its target audience. The importance of market segmentation, market research, and social marketing should not be ignored as tools for deciding whether to develop a guideline and knowing what communication to deliver, when, and to whom.

6.2.8 Implications of my findings for earlier work on the implementation of NICE guidelines

My findings can be contrasted with those of Cullum et al (2004). In their study of the dissemination and implementation of NICE guidelines, Cullum et al (2004) concluded that NICE guidelines have a faster or better adoption rate when they contain clear and unambiguous recommendations, a robust evidence base, support from relevant professional groups, and a minimal cost associated with implementation (or, if a high cost, then a good fit with national priorities), and when practitioners and managers see the advantages in adopting the NICE guideline. Cullum et al also showed that implementation of the NICE guidelines they studied was variable, and that this variability was a result of differences in funding and perceived robustness of the evidence behind the guideline.

Whilst my findings highlighted the importance of perceived advantage in adopting the NICE guidance, the key was that it was based on relative advantage. There could be independent advantages to adopting a NICE guideline, but if those advantages are less than the advantages of implementing other

guidelines, than it was not going to be implemented. Additionally, whilst the issue of buy-in did also emerge from my findings (for example, in the form of interviewees believing the guidance was not compatible with their tasks), the issue of evidence did not emerge.

There are three main possible reasons for the difference between my findings and those of Cullum et al (2004). One of the reasons for this difference may be the type and content of the guidance. For example, NICE guidance is typically the standard-setter for clinical guidelines, whilst this was not the case for workplace guidance, which is why relative advantage may have emerged as such an important issue in my findings. In this respect, my intention of researching non-clinical and non-technology-related guidance in NHS Trusts was successful in highlighting issues with workplace guidance. The second reason for this difference may be that Cullum et al mainly discuss the NICE guidelines in the form of 'compliance' rather than 'implementation'. Compliance does not require active implementation of an innovation (particularly guideline recommendations) if the organisation has already met the standards. As the RCP audits showed, there was indeed variability in compliance. What I was interested in was the implementation of the guidance, because compliance does not allow us to understand and explore the impact of the guidance itself. For example, if the guidance recommended organisations to have a flexible working policy, their compliance may not have been a result of that recommendation, but of other policies that have influenced the NHS. Finally, another reason for the difference between my findings and those of Cullum et al is my use of the Greenhalgh et al framework. My conceptual framework may have resulted in different explanations and focus. For example, a conceptualisation of a guideline based on diffusion of innovation may focus less on a robust evidence base and more on whether the guideline is relevant and useful to an organisation or target audience. Whilst Cullum et al (2004) briefly compared their results to Rogers' diffusion of innovation framework (2003), they did not use a diffusion of innovation conceptual framework to guide their approach and research, their comparison to Rogers' framework was post hoc, and the

comparison was basic. My approach of using a diffusion of innovation model as a conceptual framework for the exploration of the implementation of guidelines therefore provided useful insights.

6.2.9 The importance of context

The importance of context on influencing the variability of the diffusion of an innovation within organisations has been well documented in the literature (Fitzgerald et al, 2002; McCullough et al, 2015; Kaplan et al, 2010). The issue of contextual variation can be seen by the contrasting research of Goes and Park (1997) and Kimberly and Evanisko (1981). In a study by Goes and Park (1997) six technological and nine administrative innovations were tracked over a ten-year period in 400 Californian acute hospitals and demonstrated links with organisational size, leadership and inter-organisational ties. The authors found that inter-organisational links were effective mechanisms for exchanging knowledge and technological and administrative capabilities and enhanced hospital leaders' understanding of the external environment. The authors also found that hospitals with the most extensive organisational links tended to be large hospitals and that size too was a determinant of innovativeness. In contrast, a study by Kimberly and Evanisko (1981) did not find an association between inter-organisational links and the adoption of innovation. The authors believed that this was a contextual anomaly rather than a generalisable finding. However, Kimberly and Evanisko only looked at one context (US hospitals in the late 1970s), and with a vast amount of other contexts still awaiting exploration, it is conceivable that an increasing amount of 'contextual anomalies' would disprove the rule. Such contextual caveats are not only acknowledged by Greenhalgh et al, they are welcomed: 'herein lies the paradox. Context and "confounders" lie at the very heart of dissemination, implementation and sustainability. They are not extraneous to the object of study – they are an integral part of it' (Greenhalgh et al, 2004a, p.274). In this case, context becomes problematic to a research study if the researcher uses methods to control for context in order to produce measures that can be generalised. Whilst Greenhalgh et al (2004a) used their model on four case studies (integrated care pathways; GP fundholding; telemedicine; electronic patient records) and concluded

that their model was able to explain diffusion of innovation in these varied contexts, I applied their model to another context, thereby furthering our understanding of the applicability and use of their model.

It is the context of my research which may have contributed to the lack of emergence of some of the constructs from the Greenhalgh et al model (Damschroder and Lowery, 2013). However, to argue that because of contextual variations we cannot learn from studies in the diffusion of innovations ignores the importance of learning from previous cases and research to inform implementation strategies and the importance of understanding the context of stakeholders to guide the development of an innovation. Indeed, it is because context matters that the NICE stakeholder consultation phase in the development of its guidance is so important.

Damschroder et al (2009) argue that evaluation of the factors that influence dissemination and implementation should be based on individual perceptions. They give as an example that experts may rate an intervention as having high-quality evidence, while stakeholders implementing the intervention may have a completely different perception of the same evidence. The authors argue that it is the view of stakeholders, formed in the local context, which affects the success of implementation. Damschroder et al note that 'it is thus important to design formative evaluations that carefully consider how to elicit, construct, and interpret findings to reflect the perceptions of the individuals and their organization, not just the perceptions or judgements of outside researchers or experts' (2009, p.6). This has notable implications for the manner in which NICE gathers and responds to stakeholder comments.

6.3 Linking results to the conceptual framework

6.3.1 Complexity and comprehensiveness of the conceptual framework

My conceptual framework encompassed a multi-level approach and the use of the Greenhalgh et al model. Overall, I found the framework useful for eliciting rich explanations. By bridging the macro-

micro divide, a multi-level approach provides a 'deeper, richer portrait of organisational life – one that acknowledges the influence of the organisational context on individuals' actions and perceptions and the influence of individuals' actions and perceptions on the organisational context' (Klein et al, 1999, p.243).

My findings suggested that not all factors in diffusion of innovation are critical all the time and in all cases. My findings also suggested that adoption decisions are not dichotomous: an innovation can be formally implemented but de facto rejected. These findings may appear unsurprising given what is known in diffusion of innovation research. However, these findings also suggest that, at the stage when the adopter accepts or rejects an innovation, the perceived characteristics of the innovation (particularly its relative advantage), the effectiveness of its marketing and the outer context in which the innovation is placed are more predominant issues than the other components in the Greenhalgh et al (2004a) model.

The difficulty is that, in diffusion research, variables and factors change over time and over context, meaning that developing recommendations that are applicable to a wider area than the case studies researched is difficult. Greenhalgh et al make no claim that their model is a comprehensive depiction of the diffusion of innovation literature, and instead acknowledge that it is a somewhat simplified version to satisfy both policy and academic audiences (2004a, p.251). Indeed, Greenhalgh et al (2004a) argue that the constructs in the diffusion of innovation are not static, but moderate one another – as the context changes, as it invariably does, so does the level of influence in the factors shown to impact on innovativeness. The interplay between all these factors can be highly complex. However, there may be leverage in exploring the extent to which the constructs in the Greenhalgh et al model can truly be compartmentalised.

My findings suggest that the constructs in the Greenhalgh et al model are not only interconnected, as the model suggests, but that constructs in the model can be sub-constructs elsewhere. For example, relative advantage is itself a construct in the model, but can also be a sub-construct of every other

construct in the model. During discussion about the complexity (a construct) of the NICE guidance, for instance, interviewees referred to other innovations as being clearer and more attractive to read (relative advantage as a sub-construct). Likewise, when discussing compatibility with their needs and requirements (another construct), interviewees highlighted that other innovations were better able to provide a business case or could be used more practically (again, relative advantage as a sub-construct). Similarly, interviewees referred to other innovations when discussing incentives and sanctions. Because of this, research in diffusion of innovation should not explore the diffusion of an innovation in isolation from other innovations: ideally, research should compare the innovation of interest with existing innovations, either similar to the one of interest or different yet included in opportunity cost decisions by organisations.

In a recent paper using the Greenhalgh et al model to enrich understanding of the implementation of thrombolysis services for stroke, Boaz et al (2016) argue that conceptual models cannot and should not be seen 'as reflecting the complexities that exist in reality' (p.5). This is because models are abstract and illustrative and force contextual factors into pre-determined constructs rather than allowing for exploration of rich context in its own right. Even the use of more complex and comprehensive models, such as Greenhalgh et al's, 'encourages a mechanistic and descriptive mapping of key factors' (Boaz et al, 2016; p.5).

Upon reflection, it can be argued that the methods I employed in my study may not have allowed certain constructs to emerge. Cook et al (2012) suggested operationalising the Greenhalgh et al framework (2004a) through a combination of interviews, quantitative surveys and examination of administrative data. The authors suggested obtaining data for risk (in terms of the risk or uncertainty of the outcome associated with implementing innovation) through quantitative surveys and formalisation (the degree by which an organisation is run by rules and procedures) through administrative data. Neither of these constructs emerged from my findings and it could be argued that this may be because I only used interviews to collect data. Similarly, micro-level factors such as

group dynamics and individual behaviour did not emerge strongly from my research, and that could be because the Greenhalgh et al model is limited in its scope for explaining micro-level factors (Boaz et al, 2016).

The arguments put forward by Boaz et al (2016) therefore have merit. However, whilst the authors may be right to argue that the use of models to map and describe implementation should be a first step rather than endpoint of exploratory implementation research, they fail to discuss the issue of balancing parsimony and rich explanation (George and Bennett, 2004). Though it may be desirable to supplement the use of models with social and political theory, as argued by Boaz et al (2016), such considerations may add extra layers of complexity that might hinder practical application in all but the most well-resourced implementation study.

6.3.2 Implications of my findings to Greenhalgh et al's model

Below, I discuss how the first iteration of the Greenhalgh et al model may be improved. It is important to note that because I was using the first iteration of the Greenhalgh et al model (2004a), some of my suggestions for that model may not be relevant for the later iteration (Greenhalgh et al, 2004b), and some of the changes in the later iteration of the Greenhalgh et al model may have been detrimental. Further work is required to merge the two versions of the model whilst taking into account the suggestions I have outlined in this chapter. It is also important to note that there must inevitably be caveats when using the findings from this research to explore the limitations of the model, given that the process of implementation was not always directly linked to the innovation under study. Nevertheless the data gave useful indications of some of the strengths and weaknesses of the model.

Complexity

In the first iteration of Greenhalgh et al's model (2004a), the model contains two complexity constructs. The first type of complexity is 'low complexity', which Greenhalgh et al argue is an inherent

attribute of an innovation and describe as the perception that an innovation is simple to understand and use (Greenhalgh et al, 2004a). In their review, Greenhalgh et al state that there is strong direct evidence that if an innovation is perceived by stakeholders as being simple to use, it will be more easily adopted. Perceived complexity may be reduced through demonstration and practical experience, both of which are related to the 'linkage' construct in their model (Greenhalgh et al, 2004a).

The second type of complexity described by Greenhalgh et al is 'implementation complexity', which Greenhalgh et al state is an 'operational attribute' of an innovation and describe as the number of barriers that must be overcome for an innovation to be successfully implemented. There is moderate to strong evidence that innovations with few barriers to overcome are more easily implemented (Greenhalgh et al, 2004a).

It is important to distinguish between the above two types of complexity because an innovation may have relatively simple attributes – such as an IT system having a clear user interface – but be complicated to implement; for example, the IT system may require a complicated organisational upgrade of its technology (Greenhalgh et al, 2004a). Implementation complexity did not emerge as a theme from my findings, with the likely reason being the lack of impact the guidance made within the Trusts.

The first iteration of the Greenhalgh et al model (2004a) effectively represents the importance of complexity, but it would benefit from an explicit construct that acknowledges the importance and nuance of 'presentation' as something separate but related to 'complexity'. This would be akin to the CFIR's 'design quality and packaging' construct. It should be noted that the second iteration of the Greenhalgh et al model (2004b) omits 'implementation complexity' altogether, which is a shortcoming compared to the first iteration.

Credibility

My findings suggest that there is a difference between overall and innovation-specific credibility. This may suggest that further unpacking of the Greenhalgh et al model is needed with regard to the 'credibility' construct, which does not distinguish between overall and innovation-specific credibility. An organisation may have credibility overall, but one of its innovations may be outside the area for which it originally gained credibility. This appears to have occurred with NICE and its workplace guidance. Indeed, my findings suggested that being credible in one area can hinder credibility in another area. For example, the strong reputation in clinical areas appears to have worked against NICE when it branched out from the domains where it had earned such a reputation. Interviewees saw NICE as a largely clinical and academic organisation, but this reputation was an antithesis to the business-like approach needed for workplace guidance. Interviewees emphasised the guidance of organisations such as the Health and Safety Executive and Investors in People, who had forged their credibility in the area of the workplace.

Credibility was an important theme to emerge from my findings, and whilst I argued that the credibility construct in Greenhalgh et al's model required unpacking to acknowledge that an organisation's overall credibility may not be the same as their credibility in the domain of that specific innovation, Greenhalgh et al's second iteration (2004b) did not include the credibility construct.

Compatibility

Diffusion of innovations literature has tended to frame compatibility in terms of meeting organisational, group or individual values. This focus on values led to difficulty in operationalising the compatibility construct in the Greenhalgh et al model because the findings demonstrated an incompatibility with operational and practical needs of organisations, groups and individuals. Therefore, a distinction between compatibility with norms and values and compatibility with operational and practical needs may need to be more explicitly described in the Greenhalgh et al model. This is important because it is possible for an innovation to be, for example, incompatible with

practical needs of senior managers, whilst being compatible with the values of an organisation. Whilst the workplace guidance was not compatible with the needs and operational requirements of interviewees, it was compatible with their values and practices: the RCP audit demonstrated that Trusts had in part met the guidance and interviewees in this study stated that the NICE workplace guidance reaffirmed and reinforced their values and practices.

The need for the Greenhalgh et al model to better describe the 'compatibility' construct also extends to requiring a clearer distinction between compatibility and task relevance. Greenhalgh et al describe task relevance as the extent to which an innovation is relevant to the task performance of the end user. The senior managers I interviewed wanted quantifiable metrics, cost-effectiveness and return-on-investment examples in the workplace guidance and project implementers wanted best practice and shared learning examples. It was not apparent from Greenhalgh et al's model whether these issues were related to compatibility (in the form of compatibility with the needs of implementers) or task relevance (for example, in the extent to which best practice examples would have been relevant or would have helped project implementers implement the workplace guidance). Indeed, it can be argued that if an innovation is not relevant to a task, then it cannot be compatible with the needs of the end user, and vice versa. Whilst data can be placed in more than one code or construct, it is nonetheless important to have clear constructs in order to aid coding and analysis (McEvoy et al, 2014). I argue that if compatibility in the Greenhalgh et al model can be described as compatibility with operational and practical needs, it should be merged with 'task relevance' in order to enhance the parsimoniousness of the framework. Therefore, 'task usefulness' (which Greenhalgh et al define as the extent to which an innovation contributes to improving task performance) would continue as a construct in the model, with 'task relevance' being subsumed into the 'compatibility' construct.

A potential improvement in the second iteration of the Greenhalgh et al model is that task relevance and task usefulness, which I argue create unnecessary confusion in operationalisation, are merged into 'task issues' in the later iteration of Greenhalgh et al's model. Nevertheless, I have also argued

that the 'compatibility' construct required further clarification as it was unclear whether this was compatibility with norms and values or compatibility with operational requirements. This limitation is maintained in the later iteration of Greenhalgh et al's model.

'Felt need'

The importance of the role of 'felt need' (demand) in the diffusion of innovation suggests that the Greenhalgh et al model requires an explicit construct to acknowledge such importance. This is also relevant for the second iteration of the model.

6.3.3 Success and failure in implementing innovation

In the last five years, there have been growing calls to use conceptual models throughout the whole research process, and to reflect on the use of such models in terms of both the academic and policy implications. For example, McEvoy et al (2014) recommend that researchers provide an explicit rationale for choosing the model they apply, and state that in doing so 'authors will be making a contribution to implementation theory' (McEvoy et al, 2014, p.11). Kirk et al (2016) stated that 'better integration of the CFIR (or other theoretical frameworks) into empirical studies would help to address gaps in use of theory and advance implementation science' (p.12); whilst Nilsen (2015) stated that 'poor theoretical underpinning makes it difficult to understand and explain how and why implementation succeeds or fails, thus restraining opportunities to identify factors that predict the likelihood of implementation success and develop better strategies to achieve more successful implementation' (p.1).

However, when trying to use a model 'meaningfully', it is easy to fall into the trap of focusing too much on the model and not enough on the story of the case studies. Boaz et al's (2016) argument that a rigid use of conceptual models can lead to over simplification of the importance of context may be particularly pertinent in this situation. In focusing on 'meaningful use' (Kirk et al, 2016), I sought to

find connections between the data and the Greenhalgh et al conceptual model when at times there could have been a greater focus on the implications on NICE and its workplace guidance.

Indeed, that the case studies showed little implementation of the NICE workplace guidance is an important finding in its own right. Studies which showed little or no implementation were rare in the Greenhalgh et al review (2004a). In one example of 'failed' implementation, Lynn et al (2000) examined the implementation of an end-of-life care intervention. They concluded that assuming the target audience would demand the intervention was naïve and based on a false notion that consumer or patient demand is grounded in objective decision making. Lynn et al's argument that psychological and social forces influence a target audience's reaction towards an innovation is one that should be heeded by NICE, particularly in conjunction with my earlier discussion in section 6.2.7 with regards to market research and 'selling'. In another example, Bate et al (2007) highlight some of the success and failures of the implementation of NHS Treatment Centres. Whilst the Centres were effective at reducing waiting times, only one of the Centres had remained in its original intended form. Importantly, whilst Bate et al (2006) use the Greenhalgh et al model to evaluate the implementation of the Centres and reasons for success and failure, they make a point of heeding Greenhalgh et al's own advice of not using the constructs as a 'checklist' for interpretation (Greenhalgh et al, 2004b cited in Bate et al, 2006).

My rationale for coding using a priori codes was to link data to a conceptual model that in itself is linked to evidence in diffusion of innovation research, thereby ensuring analytical generalisability in the findings. This would allow me to add to our knowledge of the Greenhalgh et al model, and to our knowledge of diffusion of innovations. However, focusing on the implications of the data to a conceptual model might deflect the focus on what the data means to the case studies themselves. This is particularly so when there is lack of implementation, as data can be difficult to fit into a priori codes. This is because the tendency is to look for more direct references to the innovation, rather than contextual information.

Throughout my coding process, dealing with lack of implementation was challenging because whilst interviewees discussed contextual information, it was not always related to the codes. In such cases, focusing on the model meant that I might have fitted data into constructs that could have been better served had I created new constructs. For example, it could be argued that my discussion of 'felt need' was less a description of 'fit with system and goals', and more an implementation outcome of several constructs in the Greenhalgh et al model (for example, if there is little relative advantage, there is little 'felt need'). Lack of implementation not only resulted in lack of data that could be coded by the Greenhalgh et al model, it raises important questions as to the utility of innovation models in contexts where there is little implementation or indeed innovativeness. Innovation models are not necessarily required to identify lack of implementation and lack of innovativeness. Indeed, innovation models may constrain the interpretation of findings where few data exist. In such cases, contextual information may not neatly fit into the constructs of innovation models, because those constructs have largely been built from contexts where implementation has not 'failed' (Greenhalgh et al, 2004a).

Whilst such reflections may initially seem disheartening, it should be noted that I was only able to come to these considerations by going through my entire process of coding, analysing, and reflecting. In that sense, my PhD served one of its most valuable objectives – providing space for early career researchers to reflect on what went well and what could have gone better. The PhD is therefore not about getting it right the first time, but to provide space for early career researchers to go on a journey and reflect and learn from mistakes and limitations.

6.4 Implications of my findings to the work of NICE

My findings showed that the NICE workplace guidance made little impact in all three Trusts and that all three Trusts rejected the NICE workplace guidance for similar reasons. The most prominent issues to emerge from my findings was that the NICE workplace guidance lacked relative advantage,

compatibility with organisational and individual goals and tasks, and user demand, and was perceived to have few incentives and no mandates for implementation.

6.4.1 NICE fieldwork reports

NICE commissioned fieldwork reports to elicit the views of stakeholders on the relevance, utility and implementability of the recommendations within the NICE physical activity in the workplace and mental wellbeing in the workplace guidance (Greenstreet Berman, 2008; 2009). The fieldwork methods were similar for both reports: telephone interviews with representatives from stakeholder organisations such as employer groups, employee groups and health professionals; and workshops with stakeholders similar to those who were interviewed via the telephone. All participants received relevant materials and questions prior to the workshops and interviews, and the workshops and interviews were analysed using content analysis.

The findings for both reports were divided into comments specific to the NICE recommendations, and wider comments regarding implementation and practicality. A summary of the comments specific to the NICE recommendations can be found in Appendix K. They covered issues with wording, length and structure of the recommendations, the practicality of some of the recommendations, and recommendation-specific barriers. Some of the comments by participants may have contributed to changes in the NICE guidance. For example, participants said that the word 'feasible' for recommendation 3 (flexible working) in the draft NICE mental wellbeing guidance was inappropriate and suggested that this should be changed to 'reasonably practical'. In the final version of the NICE mental wellbeing guidance, 'reasonably practical' was used. However, other comments by participants did not lead to changes in the NICE guidance. For example, whilst participants raised concerns about 'health checks' in recommendation 2 of the physical activity guidance, such as what was meant by a health check and who was qualified to perform it, the recommendation in the final

version still included health checks but did not respond to the concerns expressed by participants in the fieldwork report.

In addition to the recommendation-specific comments in the fieldwork, the reports also highlighted wider issues concerning implementation. For example, the fieldwork report for the physical activity guidance stated that there could be difficulties in implementing the guidance due to the size and resources of organisations (such as small low-resource organisations), the geographical location of organisations (where travel is restricted), time and cost implications, and where an organisation has multiple offices. Respondents also stated that there was a need to sell the financial benefits to employers, and public sector stakeholders in particular stated that unless they could justify the recommendations through a cost-benefit analysis it was unlikely that they would be able to implement them. Additionally, employers wanted more advice and support on how to avoid anticipated resistance from staff who might perceive the recommendations as being top-down.

As with the fieldwork report for the physical activity guidance, the fieldwork report for the mental wellbeing guidance highlighted a number of issues that might act as barriers to implementing the guidance as a whole. For example, participants felt that the guidance needed to better address issues such as the stigma attached to mental ill health, the awareness of mental health, and other issues such as training and support for line managers. Additionally, participants felt that more implementation support was required in the guidance. They felt that the guidance needed to include links to existing policies, initiatives and legislation, provide information such as where to access appropriate support, provide case studies and examples on how to implement the recommendations in a range of contexts, and outline the financial, moral, cultural and behavioural benefits of implementing the recommendations.

My research differed from the fieldwork reports in both methods and findings. Whereas the fieldwork reports used telephone interviews and workshops, my research used face-to-face interviews, a conceptual framework (which was not used by the fieldwork reports) and no workshops. In particular,

my use of a conceptual framework based on the diffusion of innovations encouraged me to explore and link to concepts and explanations grounded in this literature base, which did not emerge in the fieldwork report findings. For example, whilst the fieldwork report stated that it looked at relevance to the organisation, this was not expanded to task relevance and usefulness for individuals; and whilst it stated that it looked at impact of the guidance, there was no link to relative advantage, which I have highlighted in this chapter as an important construct in diffusion of innovations research.

In terms of findings, my research differed from the fieldwork reports in a number of important ways. Whilst the fieldwork reports and my findings highlighted that the language used in the guidance was not appropriate for its target audience, my findings also included other characteristics of the innovation that did not emerge from the fieldwork reports, such as lack of relative advantage, task relevance, and task usefulness. In addition, whilst both fieldwork reports concluded that participants reacted positively to the NICE recommendations, my findings highlighted a lack of felt need for the guidance itself.

Perhaps one of the main reasons for the difference between my findings and those of the fieldwork reports was that the premise of the fieldwork exercise seemed to start with how the recommendations could be improved so that the guidance could be better implemented, rather than taking a more neutral stance such as exploring whether the guidance should be implemented in the first place given what is already out there. This is because despite the aim of both fieldwork reports to evaluate the relevance, usefulness and implementability of the recommendations (Greenstreet Berman, 2008; 2009), the consultation stage of both the mental wellbeing and physical activity guidance was the last stage of a six-stage process in the development of the guidance. Not only does this suggest that the fieldwork reports aim to research how to make the guidance work in practice, but it also places doubt as to whether – if the fieldwork reports highlighted no relative advantage and felt need – the guidance would be abandoned by NICE.

6.4.2 NICE stakeholder consultation

In addition to the fieldwork reports, NICE conducts stakeholder consultations on its draft guidance. A selection of comments from the stakeholder consultations for the NICE physical activity guidance and NICE mental wellbeing guidance can be seen in Appendix M. A minority of comments in the stakeholder consultations alluded to the issues of implementation, with the majority discussing the evidence or omissions of the recommendations. Where comments did highlight issues of implementation, they were typically around:

- the possible impact of a recommendation;

- the effectiveness and cost-effectiveness on the target population and on demographic groups within the target population;

- the variables and groups the recommendations may influence;

- the validity and appropriateness of the outcome measures;

- the content and execution of the recommendations;

- the effect of contextual variations on the impact of the recommendations;

- the financial and resource cost of the recommendations;

- any possible negative externalities;

- whether a balance between equity and efficiency will need to be struck;

- what factors may act as barriers or facilitators to effective implementation of the recommendations.

It was not clear why there were so few comments in the consultation documents about implementation and the attributes of the guidance, particularly as my findings suggested that these issues were of primary concern. The findings from my study suggested that, given the opportunity to focus on implementation, the target audience for the guidance had a number of valuable points to make about the diffusion of the NICE guidance. This suggests that there was a missing link between

what diffusion of innovations research tells us about the importance of innovation attributes and an effective feedback mechanism for stakeholders to express the implementation concerns.

A comparison of my findings with the NICE stakeholder consultation documents suggests that the limitations in the feedback mechanism, and the perceived 'weak' innovation attributes, may also be partly because the target audience for the guidance was too wide. Interviewees in the case study sites wanted a clear steer as to what steps they could take to implement the recommendations. In contrast, private sector comments in the stakeholder consultation document perceived the NICE guidance as too prescriptive. For example, in response to the physical activity guidance consultation, BT Group stated that 'the optimum methodology for implementation of any guidance is an issue for companies to address themselves. Prescriptive statements referring to policies or plans are not helpful and may not reflect the most suitable course for a company to take. Similarly setting targets may not be appropriate and recommending to the private sector a public sector strategy that many consider to have failed seems illogical' (NICE, 2008f, p.8). My meetings with NICE and the responses from NICE to comments in the consultation document suggest that NICE attempts to find a middle ground between two extremes (though this may be at the risk of satisfying neither position). NICE argues that each organisation is different and therefore the guidance is written in a way that allows organisations to contextualise the recommendations for their particular situation. However, the NICE workplace guidance is aimed at all employers – be they small employers with 10 staff or large employers with 10,000 staff (as in the case of one of the Trusts in the study), and is aimed at both the private and public sectors. The contrasting views of the NHS case study sites in this project and the comments in the stakeholder consultation document from the private sector suggest that NICE was not able to balance competing demands from such a diverse range of organisations and the attributes of the innovation were not targeted and suffered as a result.

Despite the contrasting views between the case study sites for my PhD research and the private sector comments in the stakeholder consultation document, it is important to note that my findings closely

echo most of the few comments in the NICE workplace guidance consultation documents that relate to implementation. Amongst other things, stakeholders wanted the guidance to provide a business case for employers outlining the costs and benefits of implementing the recommendations, to be shorter in length and have less 'academic' language, to provide case studies, best practice and practical examples to help with implementation and to be better at meeting organisational, managerial and policy demands. Stakeholders also commented that businesses would require incentive schemes or systems for monitoring implementation in order to implement voluntary recommendations, and that the guidance would be 'lost' among other similar workplace HWB initiatives.

My findings demonstrated that the concerns raised in the stakeholder consultations were not addressed by NICE. In the responses to the stakeholder consultation, NICE stated that case studies, business cases and cost-benefit tools were included in their (separate) implementation toolkit, that they would attempt to make the language in the guidance more accessible and user friendly, and that they would ensure that the guidance would complement national initiatives similar and relevant to the guidance. NICE also stated that they consulted employer and employee representatives during the development of the guidance. However, whilst case studies and best practice examples were included in the implementation toolkit, the lack of awareness of the toolkit on the part of interviewees suggests that this was an ineffective strategy compared to embedding such examples in the main document. Not doing so meant that it was at a disadvantage compared to similar innovations which were seen to include these attributes. It should have struck NICE that stakeholders continued to ask for case studies, business cases and costing tools. NICE needs to have a more effective mechanism to meet the needs of stakeholders (consumers) in a timely way. The reasons that NICE did not respond to stakeholders are unclear. My research predominantly focused on the Trusts themselves because the diffusion of innovations literature suggests that a large part of diffusion of innovation is to do with the inner context and organisational determinants. Future research will need to focus on NICE itself.

6.4.3 NICE and the end user

In 2004, Cullum et al argued that the 'NICE consultation processes do not quite capture the realities of clinical decision-making and so underestimate the challenge of implementation' (p.122). My research, conducted more than eight years after theirs, suggests that this problem is still prevalent. Cullum et al offered an analogy with marketing, stating that end users are deeply involved in specifying the characteristics of products that will affect them or for which they are the target audience. The authors recommended that NICE develop its research capacity to inform its dissemination processes. It is unclear whether NICE heeded this recommendation, but it is apparent that its processes for the NICE physical activity and mental wellbeing guidance were unable to pick up issues that hinder the implementation of the guidance in reality. This may be because its consultation processes tend to focus on the recommendations and evidence base rather than on the guidance as a whole product (for example, its aesthetics) or the guidance in relation to other similar products (its relative advantage). NICE may wish to consider a more market-research orientated approach, which looks at the guidance as a product with a user-testing stage, and/or consider using the Greenhalgh et al conceptual model as a framework to guide what information it should gather in the consultation and field testing phase. More importantly, end users should be involved at every stage of the guidance, particularly in terms of demand and commissioning, but also in terms of what is required for them to implement it successfully. Whilst the fieldwork reports attempted to address the issues of implementation, it was a case of too-little-too-late, as seeking the perceptions of the end user after the guidance has been developed and drafted reduces the ability of NICE to meet demands. In addition, NICE needs to be flexible with its guidance. For example, my findings, along with the NICE fieldwork reports and stakeholder consultation documents all highlighted a demand for case studies within the guidance itself. NICE should not ignore the demands of its end users because they do not fit with the template NICE has chosen for its guidance.

6.4.4 Innovativeness of NICE workplace guidance

One of the questions that my findings raise is whether the NICE workplace guidance can be described as an 'innovation', and whether this has any implications on the study of guidelines using diffusion of innovations research.

Gagliardi et al (2011) define guidelines as a 'syntheses of best available evidence' (p.1). In that sense, guidelines are a series of evidence statements or a piece of knowledge. My earlier use of Greenhalgh et al's (2004a) definition of innovation is helpful at this point: an innovation is 'a set of behaviours, routines and ways of working, along with any associated administrative technologies and systems, which are perceived as new by a proportion of key stakeholders' (p.36). My interpretation of 'innovation' is that it needs only to be perceived as 'new'. This suggests that a guideline is an innovation by virtue of being a product of gathering, appraising, synthesising and disseminating the evidence as a document. The innovation is not the evidence contained within the guideline, but rather the guideline as a product itself. Therefore, when interviewees stated that they did not believe there was anything new in the workplace guidance, the guidance can still be defined as an innovation because the interviewees were referring to the content of the guidance rather than the guidance as a product.

The idea of newness is important because it does not imply innovativeness. Innovativeness is a creative process or outcome (Osborne, 1998). For example, in studies by both Meyer and Goes, 1998 and Kimerly and Evanisko, 1981, the authors argued that whilst variables (like leadership) might make an organisation innovative, it does not necessarily predict whether a particular innovation would be implemented (Greenhalgh et al, 2004a). Nevertheless, my conceptualisation of innovation is only one of many. For example, Dixon-Woods et al (2011) argue that innovation is 'disruptive' (which would all but eradicate the idea that the NICE workplace guidance is an innovation), whilst Greenhalgh et al (2004a) and Bate et al (2007) differentiate innovation from organisational innovation; they argue that

organisational innovation is more than the perception of newness, and involves actions of change. In addition to organisational innovation, other types of innovation (like service and process innovations) have been identified, each with their own definition, based on different contexts (Osborne, 2001; Osborne, 1998).

Defining guidelines as innovations might reduce the importance of evidence and knowledge transfer – both of which are important factors to explore in the implementation of guidelines (Dopson et al, 2002). Disseminating evidence is the raison d'être of evidence-based guidelines. Guidelines research has also tended to focus (though not exclusively) on the main target audience of evidence-based guidelines: clinicians and healthcare workers. Therefore, researching guidelines on the basis of knowledge transfer of evidence-statements tests the dissemination and implementation of guidelines on the achievement of their own objectives. However, my grounding in diffusion of innovations research and my conceptualisation of innovation meant that the Greenhalgh et al model was not used on the individual evidence-statements or recommendations. Instead, the model was used on the guidance itself and its journey through an organisation.

6.5 Reflections on the study design and methods

The choices I made in study design and methods were based partly on my research aims and objectives and partly on the availability of resources. My retrospective semi-structured interviews with key stakeholders and analyses of qualitative data using a conceptual model as a thematic coding framework is a design typical for research on the implementation of interventions and innovations (Damschroder and Lowery, 2013; Fredriksson et al, 2014). Whilst I feel that these choices were suitable given the level of information and resources I had at the time of making them, it is important to reflect on them in light of my findings, so that lessons can be learnt.

6.5.1 Choosing guidelines and the number of Trusts

One of the main choices I made was the method by which I chose the case study Trusts. I describe in more detail in the Methods chapter how I initially chose the Trusts. I chose the Trusts using an anonymised stratified sample from the RCP audit (2011), but was concerned that participation in the voluntary audit may have signified interest and enthusiasm towards the NICE workplace guidance (or at least, HWB in the workplace) and therefore lead to selection bias. Additionally, diffusion of innovation literature suggests that the implementation of an innovation is influenced by contextual variables (McCullough et al, 2015; Kaplan et al, 2010). This meant that, whilst a stratified sample from the audit may have given a level of contextual variation, a greater level might have been achieved by also choosing Trusts that did not participate in the audit. However, my case study Trusts still varied in a number of contexts, for example geographically and in terms of resources. Additionally, whilst participation in the audit may suggest a level of enthusiasm towards the NICE workplace guidance or workplace HWB, my findings showed that there was little awareness and diffusion of the guidance. The main reason I chose Trusts from the RCP audit was in order to select a mixture of high, medium and low performing Trusts with regard to the implementation of NICE workplace guidance. However, using the RCP audit to choose a stratified sample of Trusts based on their level of implementation did not produce Trusts with different levels of implementation of the NICE workplace guidance. This is because the RCP audit was not able to discriminate between 'box-ticking' and more in-depth implementation. Another reason why the RCP audit was not useful at producing Trusts who varied in the degree to which they implemented NICE workplace guidance was that, as my findings suggest, Trusts did not see the RCP audit as an audit of NICE workplace guidance implementation but rather as an audit of the general workplace HWB policies and initiatives. Despite these issues, choosing Trusts from the RCP audit brought into focus the problem with box-ticking and audit methods to measure the implementation of NICE workplace HWB guidelines.

6.5.2 Choosing guidance

I describe in detail in the Background chapter that I chose to study the implementation of NICE workplace guidelines because of the national focus on NHS workplace health at that time (Boorman, 2009a), the transparency of NICE processes, and the status of NICE as a guideline institution. However, I still had a number of NICE workplace guidelines from which to choose. One of the possible limitations of my project regards my choice of the NICE physical activity guidance and NICE mental wellbeing guidance as the 'innovations' to study. In the Background chapter, I stated that I did not choose the NICE smoking cessation guidance as the intervention to study because it was attached to a major piece of anti-smoking legislation (House of Lords, 2006). However, my findings with regard to the influence of sanctions and mandates on the three Trusts suggest that it might have been useful to use the NICE smoking cessation guidance as one of the pieces of NICE guidance, in order to explore in more detail the influence of sanctions and mandates on Trusts and the implementation of NICE guidance.

Richer analysis might also have emerged had I compared a NICE clinical or health technology guideline with the NICE workplace guidance. This is because the conclusions I drew from my findings might have been tested had there been a comparator from a different type of NICE guidance. Likewise, other formal comparisons might have been equally interesting, such as comparing the implementation of the NICE workplace guidance with the Boorman Review, comparing NICE workplace guidance with workplace guidance from other organisations, or comparing the NICE guidance with different innovations altogether. However, whilst I did not formally compare different types of NICE guidelines, interviewees nonetheless made reference to other NICE guidelines, the Boorman Review and other innovations. As I described in the Background chapter, I was aware that such comparisons might have provided greater depth and richness to my analysis. However, limited resources meant that I could not formally explore these other comparators. My findings confirmed my previous assumptions that such comparisons would be beneficial.

6.5.3 Ratio between number of NICE guidance and number of Trusts

Another decision I made was the ratio between the number of pieces of NICE guidance and number of Trusts in my research. I describe in the Background chapter my initial reasons for studying five variables, comprising three case study Trusts and two pieces of NICE workplace guidance, and upon reflection the ratio worked well. This is because the case study Trusts provided the contextual variation required to make my conclusions applicable and transferable to policy and research settings (Yin, 2014). Four case study Trusts would have meant that I could only study the diffusion of one piece of NICE workplace guidance, which would not have given me enough variation to see whether my findings were explained by the idiosyncrasies of that one particular piece of guidance. One case study Trust would not have given me the variation I needed to explore the inner context construct in the Greenhalgh et al model. Given that my findings suggest that organisational contextual variation did not influence the diffusion of the NICE workplace guidance, two case study Trusts might have allowed me to explore a greater variation in innovations by exploring non-NICE workplace guidance (subject to available resources). However, it should be noted that my findings suggest that all three case study Trusts implemented (and rejected) the NICE workplace guidance in similar ways because of the characteristics of the workplace guidance innovation itself. Had the innovation been different, organisational context might have led to differences in implementation and therefore three case study Trusts may have still been more apt.

One of the concerns I had at the outset of my PhD research was whether I would be able to draw general conclusions from the case studies if each of their contexts was different. Ultimately, the differing contexts of the Trusts had little bearing on whether they accepted or rejected the NICE workplace guidance, and it is because I chose three varied case studies that I am happy with the level of analytical generalisability. Had there been only one case study, I would have had greater doubt as to the effect played by context in diffusion of innovation.

6.5.4 Interviews

The interviews I conducted were subject to some limitations. An overarching limitation was that the interviews took place during the time that the Health and Social Care Act in 2012 was going through the Parliamentary process and there was widespread public discourse on the financial constraints and reorganisation facing the NHS (Department of Health, 2009; Hurst and Williams, 2012). Such a context may have influenced interviewees when recalling the implementation of the NICE workplace guidance. Interviewees may have recalled or discussed the workplace guidance in the context of the Health and Social Care Act, even though the guidance was publicised three or four years prior to the Act being passed. This may have particularly influenced the theme on slack resources. However, though I was aware of this potential limitation, it was unclear whether the mentioning of financial constraints by interviewees was indeed influenced by external financial contexts at the time the interviews took place.

Most of my points of reflection emerged from the conducting of the interviews themselves. Specifically, there were incidences where my involvement as an interviewer may have influenced the interviewees. The main incidence of 'interviewer effect' I encountered were when some interviewees appeared to have erroneously stated that they were aware of the NICE workplace guidance. In these situations, my suspicions were raised because interviewees gave vague answers to specific questions. For example, some interviewees discussed public or workplace health in general instead of the NICE workplace guidance specifically, or answered with reference to other NICE guidelines. When I suspected that interviewees were not aware of the NICE workplace guidance, I probed further for clarity or asked interviewees to look at the NICE quick reference version of the workplace guidance. Showing the quick reference guide to interviewees I suspected of not being aware of the NICE workplace guidance helped explore the views of these interviewees towards NICE workplace guidance. I do not believe that providing the quick reference guide influenced the outcomes of the interviews in a negative way because the aims and objectives of the interviews were mainly event-

driven (exploring the processes of diffusion of the workplace guidance). Therefore, not being aware of the guidance meant that those particular interviewees were not involved in the events of dissemination and implementation and their views did not influence my conclusions in this regard.

'Interviewer effect' may have occurred because interviewees may have wanted the Trust to be seen in the best light, or because interviewees may have felt uneasy about not being aware of the NICE workplace guidance. Alternatively, interviewees may have believed that they were aware of the NICE workplace guidance, but mistook it for another guidance. I anticipated that 'interviewer effect' might occur, so before the interview commenced I emphasised to interviewees that their answers would be anonymised and that I was not testing their knowledge of the workplace guidance. I do not believe the incidences of 'interviewer effect' negatively impacted my findings. This is because I was able to identify during the interviews when these incidences occurred and adjust my questions and interview techniques accordingly. During the coding process, I noted when the suspected 'interviewer effect' took place, and did not include them when coding. For example, if they stated that their Trust implemented the NICE workplace guidance but I later found that they were referring to another guidance, I did not include that statement in the coding.

Another incidence of 'interviewer effect' occurred when some interviewees had read the workplace guidance in preparation for their interview (rather than in the natural course of diffusion throughout their Trust). In one case, an interviewee had stated that they had read the NICE workplace guidance in preparing for their interview and that prompted them to speak to their line manager regarding ways their Trust could implement more workplace HWB initiatives. This suggests that the NICE workplace guidance might have been disseminated more widely had more people been aware of it. It also suggests that more active engagement with stakeholders might improve the diffusion of NICE guidance. However, whilst this incidence of 'interviewer effect' may be a caveat to my overall findings, two important points should be noted. Firstly, interviewees who were aware of the NICE workplace guidance prior to the request to be interviewed did not diffuse the NICE guidance as actively as the

above case. Secondly, the above case may have been a result of being interviewed for PhD research. It was unclear whether the interviewee would have reacted to the guidance in the same way without the intervention of my study.

In addition to the issues described above, other issues should be acknowledged. For example, it should be noted that some of the key staff members who were at NICE and the case study sites at the time of the development of the physical activity (2008a) and mental wellbeing (2009a) guidance had left their respective organisations before I began my interviews. This may have reduced the quality of the interviews, as key details from personal experience may have been missing.

Another issue to note is that the perceived clarity of the NICE guidance, according to the interviewees, tested my decision to maintain a neutral stance during the interview questions. This is because when I read the guidance I considered it to be clear and concise. My personal belief that the guidance was clear put doubt in my mind as to whether the issue of lack of clarity was a problem from the side of NICE (not making the guidance clear) or from the side of the Trusts. However, I was aware that I was reading the guidance carefully and have an academic background. This was not the case for most interviewees and, indeed, one interviewee stated that the guidance was too 'academic'. Damschroder and Lowery (2013) noted that it is important to base qualitative coding in implementation on the perception of local stakeholders, since it is their perception that influences implementation. It was therefore important for me to base my conclusions and analysis on the perceptions of the interviewees, as my perception of the guidance had no bearing on its diffusion. As a result, despite my personal opinion, it was this approach that I continued to adopt throughout the analysis of the interviews.

6.5.5 Macro-meso-micro

When researching the diffusion of an innovation, determining the scope of what is included in terms of the unit of analysis may influence the conclusion that can be made. For example, my unit of analysis

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was the organisation, and through my multi-level approach I was able to explore multiple levels in the Trusts. However, had I formally included other organisations in my analysis, such as conducting interviews with staff at the RCP, my conclusion might have been different. Indeed, it can be argued that the NICE workplace guidance influenced not only national organisations, like the RCP, but also national healthcare policy debate through the Boorman Review (one of the Boorman Review recommendations was for Trusts to implement the NICE mental wellbeing guidance). However, because my unit of analysis was NHS Trusts, the influence the NICE workplace guidance had on other spheres did not emerge from my case studies.

Despite my unit of analysis being at the organisational level, Trust Metropolitan unearthed a number of interesting implications for my research and diffusion of innovation research in general. Trust Metropolitan was a multi-site Trust, with former hospitals being merged into one large Trust. These former hospitals were dispersed over several geographical locations, and my informal discussions with staff at this Trust indicated that some staff – particularly those who had worked at one of the former hospitals for a number of years – identified more with 'their' hospital than with the newly merged Trust. One of the implications of this concerns the way an innovation has been deemed to be successfully implemented. For example, if one of the sites (former hospitals) had a gym, but the other sites did not, can the newly merged Trust be said to have successfully implemented a recommendation to have a gym for staff members? I largely avoided this challenge because this potential issue did not materialise due to the lack of impact the NICE workplace guidance had in Trust Metropolitan. Nevertheless, this issue requires further exploration. Another possible implication of multi-site organisations relates to the interpretation of staff interviews. For example, it may not always be clear whether staff members are referring to their newly merged Trust or to their old hospital. I believe that I was able to successfully interpret whether interviewees were referring to their old hospital or the newly merged Trust, as I had paid particular attention to this risk for the interviews in Trust

Metropolitan. However, I did not corroborate the transcripts with interviewees, so there is a possibility that my interpretations may have been incorrect.

Another limitation with my macro-meso-micro approach is that the role of individuals did not emerge strongly in my study. This may have been because my unit of analysis was at the organisational level, and whilst the micro level should have identified key themes with regard to individuals and groups, this did not occur. This may have also been a factor of the NICE guidance itself or the contexts of the Trusts. Individual or group-level factors – the micro level – may have simply not been predominant for the context I was researching because diffusion of the innovation in the Trusts was highly concentrated. However, I might have reached a different conclusion had I used a sociological model of diffusion of innovation, such as the NPT. Furthermore, in applying the CFIR model to a range of case studies, Damschroder and Lowery (2013) noted that they did not use the CFIR construct 'characteristics of individuals' because their focus was not on individual-level behaviour. This suggests that, whilst certain frameworks may have the capacity for multi-level research that includes the micro domain, operationalisation of a framework within limited resources may inevitably mean that some levels may not be able to be researched in depth. Nevertheless, the importance of the capacity to research multiple levels of implementation remains, since models will inevitably be used in a variety of contexts with a variety of aims and objectives.

6.5.6 Coding

Helfrich et al (2010) suggest that explaining how findings map to the constructs in the conceptual framework being used, and defining codes used in qualitative analysis, help improve reporting of implementation research. I have attempted to meet these criteria in the reporting of my thesis.

The themes highlighted in my findings are the most predominant themes that emerged from the interviews. I excluded other themes because they were not mentioned or were not as prominent as the themes I highlighted. For example, one of the constructs in the Greenhalgh et al model,

sustainability, was not discussed in any real depth. My aim for excluding these more minor themes was to ensure that there was focus in my discussion and analysis of the salient issues. Table 27 below shows the constructs in the model that did not emerge in the main findings, compared to those that emerged.

Diffusion of innovation research provides four general reasons some constructs emerge over others. Firstly, it depends on the type of innovation (its attributes). The innovation itself interacts with other constructs so that some constructs emerge more strongly whilst others do not, depending on the innovation (Greenhalgh et al, 2004a). Secondly, it depends on the stage of diffusion. Some constructs may be more influential at the stage when an organisation attempts to implement an innovation. As I was ultimately researching an innovation that was not implemented or demanded, the process of diffusion did not get to latter stages like sustainability and routinisation. As a result, constructs more related to the latter stages did not emerge. Thirdly, as I highlight in section 6.2.9, there is considerable research that suggests that different contexts result in the emergence of different constructs in the diffusion of innovation. Finally, whilst some constructs may be important for general organisational innovativeness, they do not necessarily predict the implementation of a specific innovation (Greenhalgh et al, 2004a). For example, an organisation might have a good capacity to capture and implement innovation, but there may be something specific with the innovation which means that the organisation does not want or is not ready to implement that innovation at that time.

Table 27: Themes that emerged in the findings compared to those that did not emerge		
Theme	Sub-themes that emerged in the findings	Sub-themes that did not emerge in the findings
The inner context (system antecedents)	Structure	Size/maturity
	Slack resources	Formalisation
		Differentiation
		Decentralisation
		Pre-existing knowledge/skills base
		Ability to find, interpret, re-codify and integrate new knowledge
		Enablement of knowledge sharing via internal and external networks
		Leadership and vision
		Good managerial relations
		Risk-taking climate
		Clear goals and priorities
		High-quality data capture
The outer context	Incentives	Socio-political climate

	Mandates	Inter-organisational norms/values
		Inter-organisational collaboration
		Environmental stability
The innovation	Complexity	Trialability
	Compatibility	Observability
	Task usefulness	Reinvention
	Relative advantage	Feasibility
		Implementation complexity
		Divisibility
		Nature of knowledge
Linkage	Credibility of the change agency	Shared meanings and mission
	Product augmentation	Knowledge transfer
		User involvement in specification
		Capture of user-led innovation
The inner context (system readiness)	Fit with system and its goals	Tension for change
	Dedicated resources	Balance between supporters and opponents
		Assessment of implications ('soft periphery' elements including staff changes)
		Dedicated time/resources

		Monitoring and feedback
Adoption	Initial awareness of the guidance	The adopter
	Implementation	The adoption decision
		The adoption process
Communication and influence	Informal dissemination	Social networks
	Marketing	Homophily
		Peer opinion
		Expert opinion
		Champions
		Boundary spanners
		Change agents

6.5.7 Timing of research

Consideration should be given to when to conduct a retrospective analysis on the diffusion of an innovation. This is because the timing of when retrospective research is conducted and analysed may influence the conclusions made about the diffusion of that particular innovation. There does not appear to have been sufficient debate in the diffusion of innovation literature as to the appropriate time to conduct retrospective research on the diffusion of an innovation. Evidence suggests that the effects of different variables on the diffusion of an innovation are influenced by the stage of diffusion in which an innovation is (Greenhalgh et al, 2004a). My research commenced one and two years respectively after the publication of the NICE mental wellbeing and physical activity guidance. This

may not have been enough time to allow the guidance to diffuse and, as a result, I may have gathered insufficient amounts of data or come to erroneous conclusions. For example, whilst I argue that the characteristics of the NICE guidance were a fundamental reason why the guidance did not pass the adoption stage, had I conducted the retrospective analysis at a later date the NICE guidance might have been adopted and my conclusions might have been different. However, if researchers wait too long after the launch of an innovation, obtaining data through qualitative research methods may face challenges such as interviewees having difficulty recalling events. These are issues that must be explored and debated in diffusion of innovation research.

6.6 Conclusion

My findings suggested that the NICE workplace guidance had little impact and influence in the Trusts. In this chapter I have argued that the main reasons for this lack of diffusion is that the characteristics of the guidance did not meet the requirements of the target audience and the guidance was perceived by the target audience to have no unique selling points in comparison to other innovations. Whilst findings emerged for other themes, it appeared that the characteristics of the innovation presented the first hurdle to adoption. Whilst this finding corroborates other research, it also highlights a lack of weighting in the Greenhalgh et al (2004a) model: whilst 'the innovation' has a number of sub-constructs in the model, there is no indication as to the significance of these constructs.

Whilst the characteristics of the guidance were fundamental to its lack of diffusion within the Trusts, other factors were also involved in its lack of diffusion. For example, my findings suggested that, whilst the reputation of NICE may be important, it must be looked at in relation to reputation in the field of the innovation, since the innovator may enter a market where their credibility was not forged. There is scope for diffusion of innovation studies to do further work in this regard. Additionally, whilst the 'inner context' constructs were not as prominent in my study as the Greenhalgh et al model suggests they should be, issues of perceived lack of slack resources and perceived lack of fit between the NICE guidance and organisational priorities did emerge. Communication was also an issue, with NICE's 'one

size fits all' approach to the guidance meaning that language, formatting and messaging could not be targeted to increase effectiveness of dissemination. Though the NICE website has changed significantly since I began my research, and NICE has moved towards more interactive 'pathways' for linking and presenting its recommendations, my findings are nonetheless helpful for the development of guidelines in general and still relevant for NICE since the standard template used for its guidance documents has not changed.

My use of semi-structured interviews in three case studies allowed me to make the argument that the formal acceptance of the NICE workplace guidance identified by the RCP audit and the Trusts' pro formas may have been instances of box-ticking. Despite organisational variations between the Trusts, in all three Trusts only the Clinical Governance Managers recalled the pro forma used to gauge and monitor implementation and none of the Trusts actively invested resources in policies or initiatives to implement the recommendations in the guidance. This dissonance between formal acceptance and informal rejection was probably a manifestation of box-ticking, as Trusts are required by the CQC to have formal processes in place to monitor the implementation of all relevant NICE guidelines. Cullum et al (2004) argued that making adoption of recommendations more visible via audits may increase implementation and argued that NICE and the NHS should consider developing structured pro formas to audit the adoption of NICE guidance. My findings showed that, whilst there is potential for this to occur if only because audits have a motivating influence and the RCP audits had an impact in the Trusts, audit methods and what is being audited have a number of challenges to overcome to minimise box-ticking.

Despite the CQC's mandate for Trusts to set in place a process of monitoring relevant NICE guidance, another important reason for lack of diffusion of the workplace guidance within the Trusts was the lack of effective incentives and sanctions linked to the guidance. A suggestion I make in this chapter is that the Greenhalgh et al model could be applied to explore incentives and sanctions

(notwithstanding 'incentives' and 'sanctions' being part of the model), as the extent to which incentives and sanctions 'work' may be influenced by the sub-constructs included in the model.

Some of my findings above were echoed in the NICE stakeholder consultation documents and fieldwork reports for its workplace guidance. This suggests that, whilst NICE obtained feedback from stakeholders, the feedback mechanism for NICE to react to the concerns of its stakeholders was broken. Indeed, one of the most important conclusions I can draw from my findings is not the emergence of new constructs or major contradictions in the research, but rather that, despite a growing body of research into the diffusion of innovation and despite corroboration of this research by its stakeholders and fieldwork reports, NICE did not act on any of these things. The question therefore is why, as an organisation that advocates the implementation of evidence, did NICE not follow established evidence on the diffusion of innovation.

7. Conclusion

In this chapter I will outline the research and policy implications of my thesis and provide recommendations based on my findings.

7.1 Policy implications and recommendations

7.1.1 Relative advantage

My findings clearly demonstrated the importance of relative advantage to the diffusion of an innovation. As a public body, NICE has a duty to spend public funds in the most efficient way possible, which means that its guidance should be developed if it provides relative advantage or added value over and above existing innovations. Even if relative advantage can be independently demonstrated, questions should be asked as to whether the resources used to develop a piece of NICE guidance and ensure successful implementation are justified by the potential added value and relative advantage over and above its competitors.

1.Recommendation:

NICE's topic selection committee should make public a consideration of the following factors when identifying possible areas for guidance development:

- The content and quality of existing innovations.

- The user satisfaction with existing innovations.

- The market demand for the NICE guidance based on high-quality market research.

- Whether the NICE guidance can meet the needs of the target audience better than existing innovations.

- The opportunity cost for the development of that particular guidance compared to developing another guidance (given the above).

- The return on investment for the development and dissemination of that particular guidance (given the above).

- A cost-benefit analysis with regard to the option of NICE working with other organisations to improve the evidence base of existing guidance from other organisations, rather than developing new NICE guidance.

7.1.2 Compatibility with employers

There was no difference in the way the NICE workplace guidance was formatted as compared with the clinical and health technology guidelines. However, as the public health workplace guidance is aimed at different audiences, a different approach is required. Interviewees stated that the language and format of the NICE workplace guidance were not appropriate for the intended audience. NICE should ensure that its workplace guidance is differentiated from its clinical and health technology guidelines by specifically targeting employers. My findings corroborated the NICE stakeholder consultation documents by showing that NHS Trusts require case studies, cost-benefit analysis and return on investment within the workplace guidance itself (rather than as an addendum).

My findings suggested that the target audience for the workplace guidance was too broad and that future public health workplace guidance would benefit from being addressed to a narrower and more targeted audience. Targeting all organisations in all sectors reduces the ability to use specific techniques to meet target audience demands and improve implementation. This point is also relevant to multiple internal audiences. NICE should also be aware that a piece of guidance may be disseminated as-is within the organisation, rather than being changed and summarised by one audience to meet the needs of another audience. For example, my findings showed that, whilst senior managers and project implementers were both a target audience of the NICE workplace guidance, because the guidance was disseminated as-is from the senior manager to the project implementer, the project implementer perceived the guidance as too policy-orientated rather than practical.

2.Recommendation:

The NICE workplace guidance should be re-formatted and re-branded to differentiate itself from its clinical and health technology guidelines and to be more attractive and engaging to employers. In particular:

- NICE should include case studies, cost-benefit analysis and examples within their guidance document (rather than separately).
- The target audience for the NICE workplace guidance needs to be narrowed to a specific sector, size of employer, or specific employer (such as the NHS).
- If more than one staff level is targeted within a piece of guidance, there should be multiple versions of the same document, allowing for more targeted language and improved task usefulness.

7.1.3 Linkage

The perception of lack of accessibility to NICE from project implementers was evident. Though NICE has a robust website with a number of resources, direct communication was an important factor for project implementers in helping them carry out the implementation of an innovation. It is important for NICE to acknowledge this, so that the resources spent to develop the guidance are not wasted by the resources not spent to help implement the guidance.

3.Recommendation:

More investment is needed in the NICE Implementation Division in order to increase the support that NICE can provide to stakeholders.

7.1.4 Stakeholder feedback mechanism

My findings suggest that NICE did not adequately capture the implementation concerns of stakeholders, and that, where concerns were captured, they were not adequately alleviated.

4.Recommendation:

The NICE stakeholder consultation mechanism (fieldwork report and consultation documents) should be reformed so that concerns are better captured and addressed.

7.1.5 Credibility

My findings show that, though NICE was seen as a credible and trustworthy organisation, the overall credibility of NICE did not add perceived value to its workplace guidance. This is because NICE's credibility was gained in evidence-based medicine, whereas workplace health and wellbeing initiatives were seen as being more business focused.

5.Recommendation:

NICE should explore how it can add value to existing innovations. For example, NICE may wish to consult organisations with existing innovations to ensure that the best evidence is used, rather than developing an entirely new piece of guidance. This is particularly so if user satisfaction with other innovations is found to be high.

6.Recommendation:

NICE should consider co-creating innovations with organisations that have an established credibility and captured audience in non-clinical areas. For example, NICE should explore co-creating a guidance with the Health and Safety Executive (HSE), thereby pooling resources and using the established recognition of the HSE in the workplace

7.1.6 Additional investment in NICE business areas

My findings showed that with only eight change agents to consult organisations across England and Northern Ireland, NICE lacked the resources to fully engage with its target audience, helping them 'fit' the guidance to their organisation. Additionally, with over 1000 guidelines published, dissemination, communication, and branding become increasingly important to mitigate "guideline fatigue".

7.Recommendation:

NICE should consider investing more resources on increasing its implementation, market research and dissemination areas. For example, it should consider increasing the number of implementation consultants or establishing a market research department (or investing in market research).

7.2 Research implications and recommendations

7.2.1 The role of incentives and sanctions

The case study sites I researched all implemented innovations that had different sanctions and incentives, such as prizes or awards, attached to them, or that could help in meeting CQC mandates. However, it was not possible to explore and compare those innovations with the NICE workplace guidance. In consequence, there was a gap in knowledge with regard to how different NHS Trusts react to different incentives and sanctions for different innovations. This is important to understand because not all Trusts may react the same way to incentives and sanctions, and not all incentives and sanctions may have the same effect on different innovations. Incentives and sanctions can be interventions themselves, and can be viewed as innovations. Consequently, though incentives and sanctions are constructs in the Greenhalgh et al model, the model can be used to explore their effect.

8.Recommendation:

More research is needed as to the role incentives and mandates play in the diffusion of innovations by organisations. This would include using an appropriate conceptual model and studying the incentive or mandate as the innovation in question.

7.2.2 The Greenhalgh et al model

The Greenhalgh et al model was the most comprehensive model out of my shortlisted models, in terms of the number of constructs. However, it had limitations with regards to operationalisation and clarity of definitions.

9.Recommendation:

The Greenhalgh et al model would benefit from an explicit construct that acknowledges the importance and nuance of 'presentation' as something separate but related to 'complexity'. This would be akin to the CFIR's 'design quality and packaging' construct.

10.Recommendation:

Further unpacking of the Greenhalgh et al model is needed with regard to the 'credibility' construct, which does not distinguish between overall and innovation-specific credibility.

11.Recommendation:

The importance of the role of 'felt need' (demand) in the diffusion of innovation suggests that the Greenhalgh et al model requires a more explicit construct reflecting 'felt need'.

12.Recommendation:

The Greenhalgh et al model requires a conceptual distinction between effective implementation and 'box-ticking'.

7.2.3 Comparisons of innovations

My findings suggest that there was no discernible difference between the two pieces of workplace guidance in terms of impact. When researching multiple innovations within multiple case studies, it is equally important to have variations in innovation characteristics as it is to have variations in organisational characteristics.

13.Recommendation:

Research is needed comparing diffusion of different NICE guidelines (public health, health technology, clinical guidelines) in the same case study sites.

7.2.4 Audits on implementation

The RCP audit's stratification of Trusts into those who implemented NICE workplace guidance had limitations. My findings suggested that Trusts 'ticked the boxes' of the implementation of the NICE workplace guidance, and such box-ticking was not picked up by the RCP audit methods. My findings also suggested that whilst the RCP audit might have discriminated between the performance of Trusts in terms of their implementation of general workplace HWB policies, these differences did not relate to the level of implementation of NICE workplace guidance as an innovation.

14.Recommendation:

Research is needed to explore how audits can uncover 'box-ticking' without the use of high-resource research such as face-to-face qualitative interviews.

15.Recommendation:

Research is needed to explore how the implementation of general workplace health and wellbeing policies relates to the implementation of NICE workplace guidance as an innovation.

7.2.5 The timing of diffusion of innovation research

The RCP audit suggested that, despite my central argument that the NICE workplace guidance was de facto rejected, the participation of Trusts in the RCP audit meant that – whilst the NICE workplace guidance was not initially disseminated and implemented – it started to diffuse throughout the organisation because Trusts audited it. Whilst I argued that Trusts viewed the audit more as an audit of their workplace HWB initiatives than as an audit of their implementation of the NICE workplace guidance, my findings suggested that research into the diffusion of an innovation should ideally be done some time after an innovation is launched in order to allow for diffusion to take place.

16.Recommendation:

More research is needed to explore whether there is an optimum time to wait before the retrospective exploration of the diffusion of an innovation.

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Appendix A – Details of the NICE physical activity guidance

Recommendations

The guidance provides four evidence-based recommendations (NICE, 2008a). A brief outline of the recommendations is found below:

Recommendation 1: Policy and planning – Develop an organisation-wide plan or policy to encourage and support employees to be more physically active.

Recommendation 2: Implementing a physical activity programme – Introduce and monitor an organisation-wide, multi-component programme to encourage and support employees to be physically active. This could be part of a broader programme to improve health.

Recommendation 3: Components of the physical activity programme –

- Encourage employees to walk, cycle or use another mode of transport involving physical activity to travel part or all of the way to and from work (for example, by developing a travel plan)

- Help employees to be physically active during the working day

- Take account of the nature of the work and any health and safety issues.

Recommendation 4: Supporting employers – Offer support to employers who want to implement this guidance to encourage their employees to be more physically active.

Quick reference guide

The guidance is available in two formats: a quick reference guide (NICE, 2008b) and the full version of the guidance (NICE, 2008a). The quick reference guide contains a short introduction, the recommendations given in the guidance, reference to implementation tools on the NICE website, and reference to other related NICE guidance. As with the main NICE physical activity in the workplace guidance, the physical activity in the workplace quick reference guide sets out the target audience for the recommendations: 'employers and professionals in small, medium and large organisations who

have a direct or indirect role in, and responsibility for, improving health in the workplace' (NICE, 2008b, p.1). The quick reference guide emphasises its relevance to people working in human resources and occupational health, and outlines the clinical benefits of physical activity. As with the main guidance, the reference guide states that the business benefits of implementing the recommendations are 'reduced sickness absence, increased loyalty and better staff retention' (NICE, 2008b, p.1), although no examples are given.

The main guidance

The main NICE 'Promoting physical activity in the workplace' guidance (NICE, 2008a) contains more detail than the quick reference guide, and includes a discussion on the public health need for physical activity in the workplace; the factors employers need to take into account (such as equality issues); the quality of evidence; the benefits implementing the guidance can bring; and recommendations for future research. The appendices of the guidance contain details of the process used to develop the guidance, including the methods used to develop the recommendations; the evidence statements that correspond with the recommendations; the gaps in evidence; and references to supporting documents found on NICE's website.

The recommendations in the guidance are preceded by the statement that 'many employers recognise that they have an obligation to the health and wellbeing of their workforce' (NICE, 2008a, p.5). The recommendations are also preceded by the statement that they 'aim to help employers and workplace health professionals prevent the diseases associated with a lack of physical activity' (NICE, 2008a, p.5). This demonstrates the traditional epidemiological and public health aspects of the guidance, complementing the business aspects (such as the notion of reduced sickness absence) included in the 'workplace' theme.

The guidance then outlines the considerations that were made in the development of the recommendations. These considerations include (NICE, 2008a):

1. Placing the guidance as only one of a number of different strategies to increase physical activity and placing it within wider public health issues, such as obesity.

2. Emphasising that a one-off intervention will be unlikely to have the desired impact and that for physical activity to truly increase and lead to benefits there is a need for sustainable and continuous intervention.

3. Acknowledging that the needs of small and medium-sized companies are different from those of larger organisations, and attempting to make the recommendations flexible enough to be adapted to different organisations.

4. Highlighting the importance of organisational culture and the importance for the employer to lead on the guidance.

5. Stating that those interventions not mentioned in the recommendations should not necessarily be stopped just because they are not included in the guidance, as the guidance does not evaluate all interventions.

6. Stating that increasing physical activity may increase productivity and reduce costs to employers through reduced sickness absence.

7. Acknowledging that the economic modelling done for the guidance did not take into account the potential long-term benefits of increased physical activity or the short-term mental health benefits.

8. Emphasising that, without developing strategies to include everyone in physical activity initiatives and ensuring that all staff have equal access to facilities and programmes, physical activity in the workplace may increase inequalities since not all staff (e.g. night-shift workers) may be able to participate.

9. Outlining the limitations in the research evidence; for example, ascertaining what part of a multi-component initiative is responsible for a certain change or the limited workplace settings (typically larger organisations) of studies.

10. Acknowledging that there may be safety issues in cycling to work.

In my discussion chapter, I briefly revisit these considerations in light of my findings.

Implementation

Whilst the majority of the implementation support and advice that accompanies the NICE guidance is given as separate resources on the webpage for the guidance (NICE, 2008c), there is an 'Implementation' section included in the NICE 'Promoting physical activity in the workplace' guidance (NICE, 2008a). The 'Implementation' section of the guidance stipulates that implementing the guidance can help small, medium and large private and public sector employers improve the health of their employees which can in turn lead to beneficial business outcomes such as increased productivity. It further states that implementing the guidance can help NHS organisations improve their annual health check score by meeting Department of Health (DH) standards for public health, meeting DH's 'Operating Framework for 2008/9' (Department of Health, 2007), meeting DH's 'Operational plans 2008/09-2010/11' (Department of Health, 2008), and meeting government targets for improving health and reducing health inequalities, and benefit from 'cost savings, disinvestment opportunities or opportunities for redirecting resources' (NICE, 2008a, p.15) (although the guidance itself does not mention what cost savings are envisaged and in what capacity or context).

The implementation resources for the physical activity guidance are found on the webpage for the specific guidance (NICE, 2008c). The resources include a template presentation which is meant to be used by staff who have a direct or indirect role in workplace HWB in their organisation (NICE, 2008d). The presentation outlines the recommendations and finishes with potential costs and savings and items for discussion. The 'costs and savings' section makes three points: 1) 'People are essential to any business'; 2) 'Implementing a workplace physical activity scheme will incur some costs'; 3) 'The benefits are significant and far outweigh any initial costs' (NICE, 2008d, p.9). However, no further information or examples are given and the presentation does not quantify the anticipated costs and savings. In addition to the template presentation, the implementation resources contain a business case (NICE, 2008e). The business case comes in a Microsoft Excel format, and contains a template to

calculate the potential costs and benefits for an organisation of investing in a physical activity programme. The business case argues that the quantifiable benefits of a workplace physical activity programme are reduced sickness absence and improved staff satisfaction and retention (through reduced employee turnover). The business case provides examples based on national averages; for example, that workplace physical activity programmes can reduce sickness absence by 20% (NICE, 2008e). Non-quantifiable business benefits are argued to include: productivity, enhanced reputation, team working, health and wellbeing, and tax benefits (NICE, 2008e).

Appendix B – Details of the NICE mental wellbeing guidance

Recommendations

The NICE 'mental wellbeing in the workplace' guidance provides five evidence-based recommendations (NICE, 2009a). A brief outline of the recommendations is given below:

Recommendation 1: Strategic and coordinated approach to promoting employees' mental wellbeing–

- Adopt an organisation-wide approach to promoting the mental wellbeing of all employees, working in partnership with them

- Promote a culture of participation, equality and fairness that is based on open communication and inclusion

- Ensure processes for job design, selection, recruitment, training, development and appraisal promote mental wellbeing and reduce the potential for stigma and discrimination

- Create an awareness and understanding of mental wellbeing and reduce the potential for discrimination and stigma related to mental health problems.

Recommendation 2: Assessing opportunities for promoting employees' mental wellbeing and managing risks –

- Adopt a structured approach to assessing opportunities for promoting employees' mental wellbeing and managing risks.

Recommendation 3: Flexible working –

- If reasonably practical, provide employees with opportunities for flexible working according to their needs and aspirations in both their personal and working lives

- Promote a culture within the organisation that supports flexible working and addresses employees' concerns

- Consider particular models of flexible working that recognise the distinct characteristics of micro, small and medium-sized businesses and organisations.

Recommendation 4: Role of managers –

- Strengthen the role of line managers in promoting the mental wellbeing of employees through supportive leadership style and management practices.

Recommendation 5: Supporting micro, small and medium-sized businesses –

- Collaborate with micro, small and medium-sized businesses and offer advice and a range of support and services.

Quick reference guide
Like the physical activity guidance, the mental wellbeing guidance is available in two formats: a quick reference (NICE, 2009b) guide and the full version of the guidance (NICE, 2009a). The quick reference guide emphasises why work is important to the mental wellbeing of employees, and why good employee mental wellbeing can lead to improved organisational productivity and performance. It then lists the recommendations. As with the quick reference guide for physical activity in the workplace, the reference guide for promoting mental health in the workplace states that the guidance is aimed at employees, members of the general public, the public sector (such as NHS and local authorities), the voluntary sector and the private sector. It also states that commissioners and providers should implement the recommendations (NICE, 2009b).

The main guidance
The main guidance links itself to the wider national strategies such as the 'Health, work and wellbeing' strategy developed jointly by the Department for Work and Pensions, Department of Health and the Health and Safety Executive (Gov.uk, 2015) and the Black Review (2008). It states that implementation of the guidance can help meet the legal requirements employers have for duty of care. The guidance places mental wellbeing at work within an interaction between the working environment, the nature

of the work and the individual. Whilst the guidance emphasises the important role work has in enhancing mental wellbeing, it also mentions that work can have a negative consequence on mental wellbeing, particularly in the form of stress (NICE, 2009a).

The guidance highlights the wider public health issues associated with mental health, such as the estimated prevalence of common mental health problems and their link to other diseases and disorders. As with the physical activity in the workplace guidance, the mental wellbeing guidance emphasises the benefits implementation of the guidance can have for employers, including 'increased commitment and job satisfaction, staff retention, improved productivity and performance, and reduced staff absenteeism' (NICE, 2009a, p.7). Whilst organisation or industry-level examples of these benefits are not quantified or included in the guidance, it does differ from the physical activity guidance in the sense that it provides references where examples can be found. The guidance also highlights that employees in the health sector had some of the highest rates of self-reported common mental health problems (Health and Safety Executive, 2008 cited in NICE, 2009a).

A number of factors were considered when developing the recommendations for the guidance. These included:

1. Focusing on the positive role of work on mental wellbeing.

2. Acknowledging that the management and treatment of employees who are already showing signs of mental health problems are outside the scope of this guidance.

3. Assuming that work and working environments are diverse and as a result the recommendations in the guidance need to be contextualised. This was particularly the case for small and medium-sized enterprises, where there was lack of evidence on mental wellbeing in such organisations.

4. Focusing on the role stress may play in poor mental wellbeing at work.

5. Highlighting the role good mental wellbeing may have in job retention and business performance.

6. Acknowledging that there is limited experimental evidence and systematic reviews on the effectiveness and cost-effectiveness of organisation-wide approaches to promoting employee mental wellbeing, thus requiring the inclusion of other types of evidence, such as qualitative research.

In my discussion chapter, I briefly revisit these considerations in light of my findings.

Implementation

As with the NICE physical activity guidance, while the majority of the implementation support and advice that accompanies the NICE mental wellbeing guidance is given as separate resources on the webpage for the guidance (NICE, 2009d), there is also an 'Implementation' section included in the NICE 'Promoting mental wellbeing at work' guidance (NICE, 2009a). The 'Implementation' section of the guidance stipulates that implementing the guidance can help all sizes of employers improve the mental wellbeing of their employees which in turn can reduce sickness absence and staff turnover and lead to beneficial business outcomes such as increased productivity (NICE, 2009a). It further states that implementing the guidance can help NHS organisations meet DH standards for public health, DH's 'Operating Framework for 2008/9' (Department of Health, 2007), DH's 'Operational plans 2008/09-2010/11' (Department of Health, 2008), and government targets for improving health and reducing health inequalities.

The implementation resources for the mental wellbeing guidance are found on the webpage for the specific guidance (NICE, 2009d). The resources include a template presentation which is to be used by staff who have a direct or indirect role in workplace HWB in their organisation (NICE, 2009e). The presentation begins with a definition of mental wellbeing. There then follows a brief business case of why mental wellbeing is important for workplaces, providing an example of the costs associated with mental ill health to an organisation, and the potential savings from investing in mental wellbeing. Following this, the presentation provides information regarding the benefits of work for mental wellbeing, and an outline of the recommendations in the NICE mental wellbeing guidance. The

presentation concludes with a cost-benefit example of investing in mental wellbeing, items for discussion and a link to further NICE resources (NICE, 2009e).

NICE provides more resources for implementing the NICE mental wellbeing guidance than for implementing the NICE physical activity guidance. In addition to the template presentation, the implementation resources contain a business case (NICE, 2009f), a costing tool for employers (NICE, 2009g), a guide to external resources (NICE, 2009h), and advice for small and medium-sized businesses (NICE, 2009i).

The business case provides indications of the costs of mental ill health to employers and the potential savings that could accrue by investing in mental wellbeing in the workplace. The document outlines the national cost of mental ill health to UK employers, including the national costs in terms of sickness absence, reduced productivity and turnover attributed to mental ill health (NICE, 2009f). The business case then breaks down these national costs into average costs for employers. For example, it states that in an organisation of 1000 employees, 3240 sick days can be attributable to mental ill health, 4860 days can be lost to presenteeism and the annual staff turnover attributable to stress could be 13 (NICE, 2009f). All the examples are estimates based on the literature review conducted for the NICE guidance, and the business case contains references and summaries of evidence. The business case concludes by providing an example of the potential cost-savings of investing in mental wellbeing in an organisation of 1000 employees (NICE, 2009f). The mental wellbeing implementation resources also include a guide to external resources (NICE, 2009h), which was not found in the resources for the physical activity guidance. The guide to external resources is a list of references, with a description of their relevance, in the following areas: government strategy and policy documents, general mental wellbeing resources, managing stress, line management, flexible working, case studies, and related NICE guidance (NICE, 2009h). Finally, the mental wellbeing implementation resources also include a guide for small and medium-sized businesses (NICE, 2009i). This guide is mainly a summarised version

of the recommendations found in the main NICE mental wellbeing in the workplace guidance, and a

summarised version of the business case (NICE, 2009i).

Appendix C - Royal College of Physicians audit tool

Source: Royal College of Physicians (2011)

National Organisational Audit of the implementation of NICE Public Health guidance for the workplace by NHS trusts

Please answer all questions.

Please complete this questionnaire for your main site only. **This form may be used internally for data collection. Data can only be submitted for analysis online at https://audit.rcplondon.ac.uk/hwdu.** The deadline for entering data on the data collection tool is 17 December 2010.

If you are from a trust which shares facilities and management functions with other trusts, you must still complete a separate questionnaire for each trust (regardless of whether your answers are the same for each trust).

Trust name: _____

Site name (if auditing more than 1 site belonging to this trust): _____

Instructions for completion:
1. Please cross the boxes as appropriate (☒ or ⊗).
2. Please refer to the accompanying help booklet.
3. Data can only be submitted to HWDU via the webtool at https://audit.rcplondon.ac.uk/hwdu.
4. The help desk can be contacted on 020 3075 1585 or hwdu@rcplondon.ac.uk.

PART ONE: ORGANISATIONAL DATA

1.1 Please select the main type of care this trust provides (tick one only):
- ◯ Acute
- ◯ Ambulance
- ◯ Care
- ◯ Mental health
- ◯ Primary care
- ◯ Other (please specify):

1.2 What is the trust's total headcount?

    1.2.1 Approximately what proportion of the trust's headcount works on the main site?
- ◯ 25% or less
- ◯ 26%–50%
- ◯ 51%–75%
- ◯ 76%–100%

1.3 Does the trust have a named board member with responsibility for staff health and wellbeing? ◯ Yes ◯ No

    1.3.1 If yes, is this board member: (tick one only)
- ◯ Executive: Medical director
- ◯ Executive: Nursing director
- ◯ Executive: HR/Workforce director
- ◯ Executive: Finance director

◯ Executive: Estates director
◯ Executive: Operations director
◯ Chief executive
◯ Other executive board member
◯ Non- executive board member

1.4   Is staff sickness absence reported regularly to the Board?   ◯ Yes   ◯ No
    1.4.1 If yes, at what intervals?   ◯ Annual
        ◯ 6 monthly
        ◯ More frequently than 6 monthly

1.5   Is staff health and wellbeing a regular Board agenda item?   ◯ Yes   ◯ No
    1.5.1 If yes, at what intervals?   ◯ Annual
        ◯ 6 monthly
        ◯ More frequently than 6 monthly

1.6   Within the last three years, has the trust done a needs assessment to inform an organisational approach to:

    1.6.1 Obesity   ◯ Yes   ◯ No
        1.6.1.1 If yes, did you go through a formal process?   ◯ Yes   ◯ No
    1.6.2 Smoking   ◯ Yes   ◯ No
        1.6.2.1 If yes, did you go through a formal process?   ◯ Yes   ◯ No
    1.6.3 Physical activity   ◯ Yes   ◯ No
        1.6.3.1 If yes, did you go through a formal process?   ◯ Yes   ◯ No
    1.6.4 Long-term sickness absence   ◯ Yes   ◯ No
        1.6.4.1 If yes, did you go through a formal process?   ◯ Yes   ◯ No
    1.6.5 Promoting mental wellbeing   ◯ Yes   ◯ No
        1.6.5.1 If yes, did you go through a formal process?   ◯ Yes   ◯ No

1.7   What are your trust's top 3 highest health promotion topics for staff? Please select 1 for highest priority and 3 for the third highest priority
    ☐ Obesity
    ☐ Smoking
    ☐ Physical activity
    ☐ Mental wellbeing
    ☐ Other health promotion topic (please specify) [_____]
    ☐ No one topic prioritised above any other

1.8   Has the trust involved staff in planning and designing an organisational approach to:
    Obesity   ◯ Yes   ◯ No
    Smoking cessation   ◯ Yes   ◯ No
    Promoting physical activity   ◯ Yes   ◯ No
    Building site design   ◯ Yes   ◯ No
    Long-term sickness absence   ◯ Yes   ◯ No
    Promoting mental wellbeing   ◯ Yes   ◯ No

1.9   Does the trust have an umbrella/over-arching strategy or policy for staff health and wellbeing?
    ◯ Yes
    ◯ No, strategy/policy in development but incomplete
    ◯ No

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PART TWO: OBESITY (NICE CG43)

2.1 Does the trust have an organisation-wide plan or policy to help reduce obesity amongst its staff?

◯ Yes
◯ No, strategy/policy in development but incomplete
◯ No

If yes:

2.1.1 Has the obesity plan/policy been signed off by the board? ◯ Yes ◯ No

2.1.2 Does the obesity plan/policy address the different needs of different staff groups? ◯ Yes ◯ No

2.1.3 Does the trust measure uptake of any programmes in the plan/policy by different staff groups such as by grade, gender or ethnicity? ◯ Yes ◯ No

2.1.3.1 If yes, does the trust adjust the programme where there are clear differentials in uptake? ◯ Yes ◯ No

2.2 Does the trust actively promote healthy food choices, for example using signs, pricing and positioning of products to encourage healthy choices in:

Vending machines ◯ Yes ◯ No

Shops for staff and clients ◯ Yes ◯ No

Hospitality ◯ Yes ◯ No

Staff restaurant ◯ Yes ◯ No

2.3 To be effective interventions for obesity need to include the three components of activity, eating behaviour and weight reduction together. Does the trust offer overweight and obese staff multicomponent interventions that address all three? (please confirm this with the person delivering the programme) ◯ Yes ◯ No

2.3.1 If yes, is the person providing the programme trained in obesity management?

◯ Yes
◯ No
◯ Don't know

PART THREE: PHYSICAL ACTIVITY (NICE PH13) AND BUILDING/SITE DESIGN (NICE PH8)

3.1 Does the trust have an organisation-wide plan or policy to encourage and support employees to be more physically active?

◯ Yes
◯ No, strategy/policy in development but incomplete
◯ No

If yes:

3.1.1 Has the physical activity plan/policy been signed off by the board? ◯ Yes ◯ No

3.1.2 Does the physical activity plan/policy address the different needs of different staff groups? ◯ Yes ◯ No

3.1.3 Does the trust measure uptake of any programmes in the plan/policy by different staff groups such as grade, gender or ethnicity? ◯ Yes ◯ No

3.1.3.1 If yes, does the trust adjust the programme where there are clear differentials in uptake? ◯ Yes ◯ No

3.2   Does the trust provide safe and secure cycle parking for staff? ◯ Yes ◯ No

3.2.1 If yes, approximately how many bikes can it accommodate?
◯ Up to 25
◯ 26–50
◯ 51–100
◯ 101 or more

3.3   Are all parts of a campus site (two or more related buildings set together in the grounds of a defined site) linked by appropriate walking and cycling routes?
◯ Yes
◯ No
◯ Not applicable

3.4   For any new workplaces built (or in the planning stages) since 2006, does the trust have a system in place to ensure that they are linked to existing walking and cycling networks?
◯ Yes
◯ No
◯ Not applicable

3.5   Does the trust help staff to be physically active during the working day by:

Encouraging staff to walk or cycle to external meetings ◯ Yes ◯ No

Encouraging staff to use the stairs rather than lifts e.g. by putting up signs at strategic points and distributing written information ◯ Yes ◯ No

Providing information about walking and cycling routes to and from work ◯ Yes ◯ No

Providing information about walking and cycling routes around the worksite ◯ Yes ◯ No

Encouraging staff to take short walks during work breaks e.g. providing information about lunchtime walks ◯ Yes ◯ No

Encouraging staff to use local leisure facilities ◯ Yes ◯ No

Encouraging staff to set goals on how far they walk and cycle and monitor the distances they cover ◯ Yes ◯ No

3.5.1 How do you set and monitor that goals are being achieved?

[ ]

3.6   Does the trust provide:

On-site gym ◯ Yes ◯ No

On-site swimming pool ◯ Yes ◯ No

On-site squash or tennis courts ◯ Yes ◯ No

Reduced membership fees for local leisure facilities (e.g. subsidised by trust or negotiated with facility) ◯ Yes ◯ No

Bike purchase scheme ◯ Yes ◯ No

Other onsite facilities or incentive schemes to encourage physical activity (please describe)

[ ]

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3.7 During building design or refurbishment does the trust ensure staircases are designed and positioned to encourage people to use them? ◯ Yes ◯ No

3.8 Are staircases clearly signposted and attractive to use (e.g. well-lit and well-decorated)?
◯ All
◯ Most
◯ Approximately half
◯ Few
◯ None

PART FOUR: SMOKING CESSATION (NICE PH5)

4.1 Does the trust have an organisation-wide plan or policy to encourage and support employees to stop smoking?
◯ Yes
◯ No, strategy/policy in development but incomplete
◯ No

If yes:

4.1.1 Has this smoking cessation plan/policy been signed off by the board? ◯ Yes ◯ No

4.1.2 Does the plan/policy address the different needs of different staff groups? ◯ Yes ◯ No

4.1.3 Does the trust measure uptake of any programmes in the plan/policy by different staff groups such as grade, gender or ethnicity? ◯ Yes ◯ No

4.1.3.1 If yes, does the trust adjust the programme where there are clear differentials in uptake? ◯ Yes ◯ No

4.2 Does the trust publicise smoking cessation services for staff? ◯ Yes ◯ No

4.2.1 If yes, does this publicity include:

Where services are available ◯ Yes ◯ No

How to access these services ◯ Yes ◯ No

The type of help available ◯ Yes ◯ No

When services are available ◯ Yes ◯ No

4.3 Does the trust provide access to stop smoking support (either on-site or through arrangements with another local service)? ◯ Yes ◯ No

4.4 Does the trust policy allow staff to attend smoking cessation services during working hours without loss of pay? ◯ Yes ◯ No

PART FIVE: LONG-TERM SICKNESS ABSENCE (NICE PH19)

These questions relate to the organisation and the actions of managers (not the actions of occupational health specialists)

5.1 Does the trust have an organisation-wide policy for the management of long-term sickness absence (either as a stand alone policy or addressed explicitly within an absence policy)?

○ Yes **(please answer all remaining questions)**

○ No, strategy/policy in development but incomplete **(please skip to question 5.1)**

○ No **(please skip to question 5.1)**

If yes:

5.1.1 Does the policy require employees absent due to illness to inform their manager on the first day of absence?

○ Yes ○ No

5.1.2 Does the policy require managers to contact staff whose sickness absence continues beyond a week or so, for an initial enquiry to discuss their health and work?

○ Yes ○ No

If yes:

5.1.2.1 Does the policy give a trigger for when this should be done?

○ yes at 2 weeks (or less)
○ yes by 3 weeks
○ yes by 4 weeks
○ yes by 5 weeks
○ yes by 6 weeks
○ yes, later than 6 weeks
○ no

5.1.2.2 Does the policy (or accompanying guidance) ask managers to explore in this initial enquiry:

The reasons for sickness absence	○ Yes	○ No
Whether the staff member has received appropriate treatment	○ Yes	○ No
When the staff member thinks that he/she will be back at work	○ Yes	○ No
Any perceived (or actual) barriers to returning to work (including the need for workplace adjustments)	○ Yes	○ No
The potential need for a referral to OH	○ Yes	○ No
The options for returning to work and what, if any, action is required to prepare for this	○ Yes	○ No

5.1.3 Does the policy require development of a return to work plan agreed between the manager and the employee?

○ Yes ○ No

5.1.3.1 If yes, does the policy specify that managers must consider, with the employee (taking account of any OH advice), the need for:

A gradual return to the original job by increasing the hours and days worked over a period of time	○ Yes	○ No
A return to some of the duties of the original job	○ Yes	○ No
A move to another job within the organisation (on a temporary or permanent basis)	○ Yes	○ No

For more complex cases of long-term sickness absence, NICE guidance recommends the appointment of a case manager. This person co-ordinates any assessments and rehabilitation so that actions are done appropriately and on time. Please read the help notes for more details before answering the questions below.

5.2   Does the trust use case managers for the more complex cases of   ◯ Yes ◯ No
       long-term sickness absence?

       If yes:

       5.2.1 What is the background of the case managers?

              Occupational Health   ◯ Yes ◯ No
              Human Resources   ◯ Yes ◯ No
              Line management   ◯ Yes ◯ No
              Other (please specify):   [   ]

       5.2.2 Does the case manager:

              Monitor absence data in real time   ◯ Yes ◯ No
              Co-ordinate any required assessments   ◯ Yes ◯ No
              Timetable actions to eliminate delays between milestones   ◯ Yes ◯ No
              Initiate formal interventions   ◯ Yes ◯ No
              Prompt and track actions   ◯ Yes ◯ No
              Provide periodic reports to stakeholders   ◯ Yes ◯ No

5.3   Does the trust record absence data in real time (e.g. through ESR   ◯ Yes fully
       self-service)?
                                                                              ◯ Yes partially

                                                                              ◯ No

5.4   Does the trust routinely identify staff who are on long-term   ◯ Yes ◯ No
       sick using a central system (e.g. by interrogating ESR and
       running reports at regular intervals)?

5.5   Does the trust monitor trust trends in long-term sickness absence?   ◯ Yes ◯ No

       5.5.1 If yes, who is long-term sickness absence information
              reported to:

              HR   ◯ Yes ◯ No
              Line manager   ◯ Yes ◯ No
              Divisional/ directorate manager   ◯ Yes ◯ No
              Trust board   ◯ Yes ◯ No
              Other (please specify)   [   ]

5.6   Does the trust's OH provider routinely collect and report on
       the following data?

              Time from start of absence to referral to OH   ◯ Yes ◯ No
              Time from receipt of OH referral to OH appointment   ◯ Yes ◯ No
              Time from OH appointment to issue of OH report   ◯ Yes ◯ No

       5.6.1 If any of the above data is routinely collected, who is
              this information reported to?

              HR   ◯ Yes ◯ No
              Trust board   ◯ Yes ◯ No
              Other (please specify):   [   ]

5.7   Does the trust provide:

    5.7.1 Education/ training events or programmes on physical and   ◯ Yes ◯ No
           mental coping strategies/resilience for its staff

    5.7.2 Physiotherapy for its staff   ◯ Yes ◯ No

    5.7.3 Psychological therapies for its staff   ◯ Yes ◯ No

        5.7.3.1 If yes, are these provided by:

               Qualified psychologists   ◯ Yes ◯ No

               Counsellors trained in CBT approach   ◯ Yes ◯ No

               OH staff trained in CBT approach   ◯ Yes ◯ No

               Other staff trained in CBT   ◯ Yes ◯ No

               Other   [   ]

        5.7.3.2 Does the trust verify the credentials of all   ◯ Yes ◯ No
               practitioners providing psychological interventions
               for its staff (including outsourced provision)?

5.8   Does the trust provide training for managers on how to manage   ◯ Yes ◯ No
    staff on long-term sick (either as stand alone training or part of
    a broader sickness absence training)?

    5.8.1 If yes, is this training mandatory for all managers?   ◯ Yes ◯ No

PART SIX: PROMOTING MENTAL WELLBEING (NICE PH22)

6.1   Does the trust have an organisation-wide plan/ policy to promoting   ◯ Yes
    mental wellbeing amongst its staff?   ◯ No, strategy/policy in development
                                   but incomplete
                                  ◯ No

    If yes:

    6.1.1 Has the plan/policy to promote mental wellbeing been   ◯ Yes ◯ No
           signed off by the board?

    6.1.2 Does this plan/policy integrate the promotion of mental   ◯ Yes ◯ No
           wellbeing into all policies and practices concerned with
           managing people, including those related to employment
           rights and working conditions?

    6.1.3 Does the plan/policy address the different needs of different   ◯ Yes ◯ No
           staff groups, and include measures to maximise the
           opportunity for all employees to participate?

    6.1.4 Does the trust measure uptake of any programmes in the   ◯ Yes ◯ No
           plan/policy by different staff groups such as by grade,
           gender or ethnicity?

        6.1.4.1 If yes, does the trust adjust the programme where   ◯ Yes ◯ No
               there are clear differentials in uptake?

NICE (and other national) guidance expects trusts to adopt a structured approach to promoting employees' mental wellbeing and managing risks.

6.2	Does the trust have systems for monitoring the mental wellbeing of employees?	◯ Yes ◯ No
	6.2.1 How do you monitor mental wellbeing of staff?	[ ]
6.3	Does the trust formally review the findings of the annual NHS staff survey?	◯ Yes ◯ No
6.4	Does the trust develop an action plan based on the NHS staff survey findings?	◯ Yes ◯ No
6.5	Does the trust provide training for line managers on how to promote and protect employee mental wellbeing?	◯ Yes ◯ No
	6.5.1 If yes, is this training mandatory for all line managers?	◯ Yes ◯ No
6.6	Does the trust provide training to ensure line managers are able to identify and respond with sensitivity to employees' emotional concerns, and symptoms of mental health problems?	◯ Yes ◯ No
	6.6.1 If yes, is this training mandatory for all line managers?	◯ Yes ◯ No
6.7	Does the trust provide training to ensure that line managers understand when it is necessary to refer an employee to occupational health services or other sources of help and support?	◯ Yes ◯ No
	6.7.1 If yes, is this training mandatory for all line managers?	◯ Yes ◯ No

Appendix D – Research and development approval from case study sites

NB: identifiable information has been redacted electronically. Hard copies contain original names

Project Reference: PIC1687
REC Reference:

10th April 2012

Mr Adrian Baker
1-19 Torrington Place
University College London
WC1E 7HB

Dear Mr. Baker

Re: Processes of implementing NICE workplace guidance in NHS Trusts

I am writing to confirm that the above project has been reviewed by the R&D Unit on behalf of _____ and it has been granted approval to proceed as a *Participation Identification Centre (PIC)*.

Agreement to act as a PIC allows identification of potential participants and referral to the research team. It does not permit informed consent of any other protocol procedures to be undertaken at this site.

As PICs are not research sites, the Trust does not accept liability for the research and is not responsible for providing indemnity.

The current version of the protocol is: Version 2 dated 22nd February 2012

Conditions of Approval:

1. Patient Identification is carried out in accordance with the principles set out in the Research Governance Framework for Health and Social Care (2nd Edition DH 2005) and the Data Protection Act (1998).
2. _____ will not be liable for any additional costs during, or at the end of the study, as a result of participation in the study.

Please submit any amendments to the study to the R&D Unit via

Yours sincerely

24th July 2012

Mr Adrian Baker
1-19 Torrington Place
University College London
WC1E 7BH

Dear Mr Baker,

Project Title: Exploring the processes of dissemination and implementation of NICE workplace health and wellbeing guidance in NHS acute Trusts.

Short Title: The process of implementing NICE workplace guidance in NHS Trusts v2

Joint Research Compliance Office Reference and Insurance Reference Number: JROSM0320

Ethics reference number: Not Applicable

Chief Investigator: Professor Rosalind Raine, Mr Adrian Baker (student and site investigator at ██████)

After review of the ethics application and supporting documentation for the above study, I can confirm that ████████ will act as Sponsor for this project. I can also confirm that, on the basis of information supplied in the returned insurance questionnaire, the above research will be covered by ████████ negligent (public liability) and non-negligent harm (no fault) policy: number ████

The project has now been approved by the Joint Research Office and may now start at ████ ████████████████████ Please note that the start date of the project is the date of this letter and the duration is the same as that provided in your application form.

The list of documents reviewed and approved by the Joint Research Office under requirements of the Research Governance Framework are as follows:

Document	Version	Date
NRES NHS (IRAS) R&D Form, Version 3.4	70906/307029/14/984	22nd March 2012
Participant/Staff Information Sheet	Version 1.5	23rd February 2012
Participant/Staff Informed Consent Form	Version 1.4	12th July 2012
Interview Schedule for managers	Version 1.9	22nd February 2012
Interview Schedule for frontline staff	Version 1.2	22nd February 2012
Interview Cover Letter	Version 1.2	28th February 2012
Documents Cover Letter	Version 1.2	28th February 2012
Application for inclusion of a		

research project Form 9 - UCL		
Study Research Protocol	Version 2.1	12th March 2012
Participant/Staff Information Sheet	Version 1.6	23rd February 2012
Certificate of Insurance – Newlines Group insurance certificate	Policy No: WD1100528	15th August 2011
site-investigator (Student) CV: Mr Adrian Baker	Version 02	24th February 2012

Before you commence your research, please note that you must be aware of your obligations to comply with the minimum requirements for compliance with the Research Governance indicators 17 (Data Protection); 25 (Health and Safety) and 22 (Financial Probity). Details of the requirements to be met can be found in the Research Governance Framework available on www.dh.gov.uk.

Under the Research Governance regulations, Serious Adverse Event Reports and amendments to the protocol or other supporting documents must be forwarded to the Joint Research Compliance Office. In accordance with the Research Governance Framework, research projects carried out in the Trust will be randomly chosen by the Joint Research Compliance Office for auditing.

Please do not hesitate to contact me should you require any further information.

I wish you well in your research.

Yours sincerely,

Joint Research Compliance Office Audit Checklist

*For **urgent** enquiries when the office is not staffed contact*
R&D department on

8th August 2012

Mr Adrian Baker
1 – 19 Torrington Place
University College London
WC1E 7HB

Dear Mr Baker

The processes of implementing NICE workplace guidance in NHS Trusts V2 –
R&D Ref: 2012OTH008

I am writing to confirm that the above project has been reviewed by
Operational and Governance (ROC) Committee and has approval to proceed.

Document reviewed:
SSIF
R&D Form
Protocol   V2   22nd February 2012
Interview Cover Letter   V1.2_
Trust Information Sheet   V1.6   23rd February 2012
Staff Information Sheet   V1.5   23rd February 2012
Staff Consent Form   V1.3   2nd October 2011
Semi-structured Interview Schedule for Managers   V1.9
Semi-structured Interview Schedule for front-line staff   V1.2
Documents Cover Letter   V1.2
Document Request Information Sheet   V1.5
UCL Application

This study has been deemed to be a service evaluation and has no material ethical issues. As
such, it is not necessary to obtain ethical approval. However, we would ask that this study is
conducted according to the Standard Terms and Conditions for Research at
NHS Trust (copy enclosed).

Please sign and date the enclosed copy of this letter and return to the R&D Unit
to confirm your compliance with these Terms and Conditions.

Yours sincerely

Research & Development Manager

The processes of implementing NICE workplace guidance in NHS Trusts

VERSION 1.5   23 Feb 2012

We would like to invite you to take part in a research study. This information sheet gives you a brief summary of the research and will help you decide whether you would like to take part.

Please take time to read the following information carefully.

What is the purpose of the project?

The project seeks to understand how NHS acute Trusts put the NICE workplace guidance on 'Promoting mental wellbeing at work' and 'Promoting physical activity in the workplace' into practice.

Why are you inviting me to take part?

Your hospital has agreed to take part in the study, and we have identified a number of ways in which staff can help us to understand how the workplace guidance is implemented.

How will I be involved in the project?

Taking part in the research will be by means of a face-to-face interview with Mr. Adrian Baker, PhD student. It will mean talking about how your Trust puts these two pieces of NICE guidance into practice, or talking about health and wellbeing in your Trust. The questions will be open-ended to allow you the chance to discuss the issues that you feel are important. The interview will last between 30 mins and one hour and may be terminated by you at any time. We would like to audio-record and transcribe the interviews so we can have an accurate record of what you tell us.

If you agree to participate, the interview will take place at a time and location of your choosing.

All information given during these interviews will be kept strictly confidential and no names will be attached to any information provided. The recordings will be deleted after being transcribed and analysed by the research team.

Do I have to take part?

It is completely up to you whether you take part. If you decide to take part you will still be free to withdraw at any time and without giving a reason. You will be asked to sign a consent form, and given a copy to keep. A decision not to take part or a decision to withdraw from the study will not affect your work in any way.

Are there any benefits in taking part?

NICE guidance aims to improve the health and wellbeing of staff and provides evidence-based recommendations to employers. The interviews will help us explore how Trusts implement NICE guidance. It is hoped that the findings will help your Trust and other Trusts across the NHS to implement the guidance more effectively. We also hope this research will help NICE understand how Trusts implement their workplace guidance so that they can provide more helpful advice to Trusts.

Are there any risks in taking part?

There are no anticipated risks in taking part, although the interview will take up to one hour of your time.

Will my taking part in the study be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence. If you are interviewed, this will take place in private, and the recording will not contain your name or any personal information, only a study identification number. All recordings and transcripts will be encrypted. Only those members of the research team who are directly involved in analysing the information will have access to the recordings. In publications and reports, the identity of participants and Trusts will not be revealed. Professor Rosalind Raine is the Chief Investigator and she has overall responsibility for confidentiality and data security.

What will happen to the results of the research study?

Once the study has finished the results will be analysed and conclusions drawn about how NHS acute Trusts put the NICE workplace health and wellbeing guidance into practice. Findings will be published in scientific journals, but documents and Trusts will be referred to in anonymised form. Quotes from documents will be used, but again will be anonymised. We will not use any quotes where the document concerned could be identified. We will also visit your Trust and provide a summary of our findings. Trusts will have the opportunity to discuss the findings with us and to give us their views on the recommendations.

Who is organising and funding the project?

This research is being funded by Colt Foundation and University College London and carried out for a PhD project, under the supervision of Professor Rosalind Raine of University College London and Professor Glenn Robert of King's College London.

What do I do if I wish to make a complaint about the research?

If you wish to complain about any aspect of the research, you should contact the Chief Investigator, Professor Rosalind Raine or the researcher, Mr Adrian Baker. If you feel you do not receive a satisfactory response and you wish to take the matter further you should contact the Complaints Manager (see below) giving the project title and the Chief Investigator's contact details.

Contact details

Please contact Mr Adrian Baker if you are interested in participating, if you would like to ask questions about the study or for any other reason:

By telephone   :   07759547807

By email: adrian.baker.10@ucl.ac.uk

By post: Mr Adrian Baker

                        Department of Epidemiology and Public Health,

                        University College London

                        1-19 Torrington Place,

                        London WC1E 6BT

You can also contact:

Professor Raine on 0207 679 1713 or by email (r.raine@ucl.ac.uk) or

Professor Glenn Robert on 020 7848 3048 or by email (glenn.robert@kcl.ac.uk)

Contact details for the Complaints Manager are

Joint UCL,UCLH & Royal Free Biomedical Research Unit

1st Floor Maple House

149 Tottenham Court Road

London W1T 7NF

Telephone: 0207 380 9995

Thank you very much for taking the time to read this information about the study.

Appendix F – Staff consent form

VERSION 1.4   12 July 2012

UCL Project ID number: Participant ID number for this study:

Title of study: The processes of implementing NICE workplace guidance in NHS Trusts

Chief investigator: Professor Rosalind Raine   **Researcher: Mr Adrian Baker**

INFORMED CONSENT FORM

Please tick box as appropriate

1. I confirm that I have read and understand the participant information sheet dated 23/02/12 (version 1.5) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason and without my legal rights being affected.

3. I understand that all the information I provide for the purposes of this study will be kept strictly confidential.

4. I consent to the interview being taped and understand that these recordings will be stored securely and destroyed after analysis is complete.

5. I agree to being quoted anonymously in the results.

6. I agree to take part in this study.

_____   _____   _____

Name of Participant (PRINT)   Date   Signature

_____   _____   _____

Name of person taking consent   Date   Signature

335

Appendix G – Staff interview cover letter

Dear…

We would like to invite you to take part in a Colt Foundation and University of College London funded research study on how NHS acute Trusts put the NICE workplace health and wellbeing guidance into practice. This research is being carried out for a PhD project, under the supervision of Professor Rosalind Raine of University College London and Professor Glenn Robert of King's College London.

Your hospital has agreed to take part in this study, which will be comprised of interviews and review of documents.

This letter is to request an interview with you at a place and time of your convenience. The interview is entirely voluntary and you can refuse to take part without giving any reason and without it effecting your position. An attached sheet provides further information you may need in deciding on whether to participate.

If you would like to know anything more or have further questions, please contact Mr Adrian Baker at adrian.baker.10@ucl.ac.uk

Kind regards,

Adrian

Adrian Baker

Colt Doctoral Research Fellow
Centre for Applied Health Research
Research Department of Epidemiology and Public Health
University College London

The processes of implementing NICE workplace guidance in NHS Trusts

Aims and objectives

To explore how the NICE workplace health and wellbeing guidance has been communicated in the Trust and how it has been put into practice.

This will be achieved by objectives that will:

1. Describe how the NICE workplace guidance is communicated to and within NHS acute Trusts
2. Describe how the NICE workplace guidance is put into practice in NHS acute Trusts
3. Explore the organisational factors in the Trusts that make it easier or harder to communicate and put into practice the NICE workplace guidance
4. Examine the differences between official Trust policies regarding NICE workplace guidance and the personal views of senior level and middle management staff
5. Explore how much the NICE workplace guidance influences Trust policy

Introduction

Aim: to introduce the research, the ethics, and set the context for the proceeding discussion

1. Introduce myself
2. Introduce the study: who it is for, what it is about
3. Talk through key points:

a. Purpose of the interview
b. Length of the interview
c. Voluntary nature of participation, right to withdraw and right not to answer questions
d. Reasons for recording interview
e. Transcribed or summarised
f. Sign consent form
g. Refer to the NICE 'Promoting mental wellbeing at work' and 'Promoting physical activity in the workplace' as 'the guidance' just to keep the questions shorter
h. Emphasise – only interested in these two sets of guidance
4. Confidentiality, and how findings will be reported
5. Any questions they have

Background

Aim: to introduce the respondent and highlight how their role fits within the organisation and how it might influence the dissemination and implementation of the guidance

1. Their role in the Trust
   a. What they do
   b. Their responsibilities with regards to staff health and wellbeing (HWB)
   c. Their responsibilities with regards to NICE guidance in general and workplace guidance in particular
   d. What percentage of their time do they normally devote to staff HWB, NICE guidance in general, and the workplace guidance in particular

2. How their role fits within the organisation
   a. Who else shares responsibilities with regards to staff HWB
   b. Who else shares responsibilities with regards to NICE workplace guidance
   c. How often do the people who share these responsibilities meet
   d. Where does staff HWB fit within organisational priority?
   e. Where does the NICE workplace guidance fit within organisational priority?

Processes of dissemination and implementation

Aim: to explore how the NICE workplace guidance is communicated and put into practice throughout the Trust

3. Chain of events (starting from the first time the Trust is aware of the guidance) for communicating the guidance throughout the Trust (probe to get names of job positions and departments)
   a. Who does what and when?
   b. How is it planned, resourced and managed?
   c. How are staff made aware of the guidance and what it means to them?

       d.   Any differences between the two pieces of guidance? E.g. how they are handled? Different people involved?

       e.   Prioritisation of recommendations or guidance

4. Chain of events (starting from the first time the Trust is aware of the guidance) for putting into practice the guidance throughout the Trust (probe to get names of job positions and departments)

       a.   Who does what and when?

       b.   How is it planned, resourced and managed?

       c.   Prioritisation of recommendations and guidance

       d.   Is the guidance customised/adapted locally? If so, who is involved in this and who decides when it is ready to be put into practice? If not, what is the rationale?

       e.   Is it linked to other initiatives or HWB areas?

       f.   What is the relationship between putting the guidance into practice and communicating the guidance? Are the strategies separate? The same? Linked?

       g.   Any differences between the two pieces of guidance? E.g. how they are handled? Different people involved?

       h.   Has the way the Trust deals with the guidance changed over time? If so, why and in what ways? If not, why not?

5. Is there anything that the Trust does to know whether putting the guidance into practice is making a difference to staff wellbeing?

Perspectives from management

Aim: to identify the differences between management views and official documentation regarding NICE workplace health and wellbeing guidance

6. How does the guidance influence the Trust's workplace health and wellbeing policies?

       a.   What they feel is the value of the guidance

       b.   What are the costs and benefits of the implementing the guidance?

       c.   Is one more valuable than the other, and why?

7. Do they feel the guidance has made a real difference in their Trust?

       a.   Reasons for their answer

       b.   What has happened in the Trust as a result of these pieces of guidance?

       c.   Get specific examples

Barriers and facilitators

Aim: to identify the things that make it harder or easier to communicate the NICE workplace guidance and put them into practice

8. How much investment is needed to communicate the guidance to staff and put it into practice?

a. Money
b. People
c. Time
d. Any difference between the two guidance?

9. What they think helps and gets in the way of communicating the guidance in the Trust
    a. Content of the guidance
    b. Too prescriptive or vague?
    c. Organisational context?
    d. External context?
    e. Resources

10. What they think helps and gets in the way of putting the guidance into practice in the Trust
    a. Content of the guidance
    b. Too prescriptive or vague?
    c. Organisational context?
    d. External context?
    e. Resources

11. Any difference between the two pieces of guidance in terms of the things that help and get in the way?

12. What they think are the essential factors that determine whether the Trust effectively communicates the guidance and puts it into practice?

Suggestions

Aim: to get respondent's thoughts on how to improve dissemination and implementation of the guidance

13. Would they do anything differently if NICE published new workplace guidance?

14. What they think NICE should do to help communicate its workplace guidance and put it into practice in Trusts?

15. What they think of the implementation toolkit provided by NICE?
    a. Any suggestions they would like to make for improvement? Would they like to see anything else in the toolkit (and why)?

16. Anything else they think is relevant?

The processes of implementing NICE workplace guidance in NHS Trusts

Aims and objectives

To explore how the NICE workplace health and wellbeing guidance has been communicated in the Trust and how it has been put into practice.

This will be achieved by objectives that will:

1. Describe how the NICE workplace guidance is communicated to and within NHS acute Trusts
2. Describe how the NICE workplace guidance is put into practice in NHS acute Trusts
3. Explore the organisational factors in the Trusts that make it easier or harder to communicate and put into practice the NICE workplace guidance
4. Examine the differences between official Trust policies regarding NICE workplace guidance and the personal views of senior level and middle management staff
5. Explore how much the NICE workplace guidance influences Trust policy

Introduction

Aim: to introduce the research, the ethics, and set the context for the proceeding discussion

1. Introduce myself
2. Introduce the study: who it is for, what it is about
3. Talk through key points:
   a. Purpose of the interview
   b. Length of the interview

      c.   Voluntary nature of participation, right to withdraw and right not to answer questions

      d.   Reasons for recording interview

      e.   Sign consent form

      f.   Define what I mean by health and wellbeing in the Trust

4. Confidentiality, and how findings will be reported

5. Any questions they have

Background
Aim: to introduce the respondent

6. Their role in the Trust
      a.   What they do

Health and wellbeing initiatives in the Trust
Aim: to describe and explore the general HWB initiatives in the Trust

7. Over the last three years (if you have been in the Trust that long) were you aware or have you experienced any health and wellbeing (HWB) initiatives provided or promoted by the Trust?

a. If yes:
      i.   Can you describe broadly what you saw or experienced?
      ii.   What do you think may have led to the Trust to promote these initiatives?
          1. Concern for sick leave
          2. Public health/health promotion
          3. Government guidance

b. If no:
      i.   Move to question 5

8. How did you/do you find out about the health and wellbeing (HWB) initiatives in your Trust?

a. Email? Intranet? Hardcopies? Posters? Bulletins? Leaflets?

b. What is the content? – physical activity? Mental wellbeing?

c. When does the Trust communicate this with staff? How often?

9. Involvement of staff in developing HWB strategies and initiatives in the Trust

a. Do you know if staff are currently involved or engaged with by the Trust? If yes, in what ways?

b. Do you think staff should be involved? Why? Which staff? How can they be involved? – attend meetings; ask their manager for HWB initiatives; form staff HWB groups (e.g. running groups) etc.

10. Do they think staff HWB should be a Trust priority?

a. Reasons

11. Are you aware of the NICE 'promoting physical activity in the workplace' guidance and the NICE 'mental wellbeing in the workplace' guidance?
    a. If not, move to the next question
    b. If yes: where did they find out about it? When was this? Then move to the next question

NICE quick reference guide

Aim: to explore the potential barriers and facilitators to the NICE guidance from the perspective of front line staff

Show staff both pieces of NICE quick reference guidance.

Before asking the next question:

Refer to the NICE 'Promoting mental wellbeing at work' and 'Promoting physical activity in the workplace' as 'the guidance' just to keep the questions shorter

Emphasise – only interested in these two sets of guidance

1. Initial reaction
   a. What they feel is the value of the guidance – raises awareness amongst employers? Topics are important for NHS staff?
   b. Strengths – common sense? Simple and easy to deliver?
   c. Weaknesses – vague? Won't work?
   d. Is content realistic in the context of NHS acute Trusts? Do staff have enough time? Do managers have enough time? Do Trusts have enough resources?
   e. Would they prioritise anything? Mental wellbeing? Physical activity? Some recommendations over others? Why?

2. Do you know if the Trust has put any of these recommendations into practice?
   a. What has been implemented?
   b. What form? When?
   c. Do they think the guidance has made/can make a real difference in their Trust?

3. Do you know if the information/content in this guidance has been communicated to staff in the Trust?
   a. What has been communicated? When? How? How did they or colleagues react to it? ('seen it all before', 'tick box'? 'good the Trust is doing something', etc.)

4. Can you think of any obstacles or things that would make it harder for your Trust to put the guidance into practice?
    a. Content (not realistic for Trusts; too vague)
    b. Resources (not enough time; not enough money)
    c. Priorities (reorganisation; flu; 'fire fighting')
    d. Staff issues (won't be well received by staff; staff would rather have more time off)

5. What do you think would help communicate the guidance to staff and put the guidance into practice?
    a. Staff engagement
    b. Tailoring to local needs

Suggestions

Aim: to get respondent's thoughts on how to improve dissemination and implementation of the guidance

6. What factors do they think the Trust should take into account when putting the guidance into practice?
    a. Consult staff/get staff engaged?
    b. If staff have enough time?

7. Is there anything else you would like to comment on?

Appendix J – Interview schedule for NICE staff

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Aims and objectives

To explore the processes, barriers and facilitators in disseminating and implementing NICE workplace health and wellbeing guidance within NHS acute Trusts

This will be achieved by objectives that will:

1. Describe the processes by which the NICE workplace guidance is disseminated to and within NHS acute Trusts
2. Describe the processes of implementation of NICE workplace guidance within NHS acute Trusts
3. Explore the organisational characteristics of the Trusts that both facilitate and hinder the dissemination and implementation of the NICE workplace guidance
4. Examine the differences between official Trust policies regarding NICE workplace health and wellbeing guidance and the personal views of senior level and middle management staff
5. Explore the extent to which NICE workplace guidance influences Trust policy

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Introduction

Aim: to introduce the research, the ethics, and set the context for the proceeding discussion

1. Introduce myself
2. Introduce the study: who it is for, what it is about
3. Talk through key points:
   a. Purpose of the interview
   b. Length of the interview
   c. Voluntary nature of participation, right to withdraw and right not to answer questions
   d. Reasons for recording interview
   e. Sign consent form
   f. Refer to the NICE 'Promoting mental wellbeing at work' and 'Promoting physical activity in the workplace' as 'the guidance' just to keep the questions shorter
4. Confidentiality, and how findings will be reported
5. Any questions they have

Background

Aim: to introduce the scope for NICE dissemination and implementation of the guidance

6. Describe NICE's remit for implementation and dissemination
   a. How far can they go?
   b. What is their scope?
   c. What limits?
   d. How far they can go to help Trusts
   e. Examples

Issues of dissemination and implementation

Aim: to explore the nuances of how NICE disseminate and implement the guidance to Trusts throughout the Trust

7. Can you walk me through how and what NICE does to disseminate the workplace guidance to acute Trusts?
   a. Who is in charge of dissemination?
   b. Has this process changed from the physical activity guidance to the mental wellbeing guidance? If so, how?
   c. Who was the workplace guidance disseminated to in the Trusts?
   d. What is the general reaction from acute Trusts when they receive the workplace guidance? What do they do? What are they supposed to do?
   e. Does NICE expect all acute Trust staff to know about the recommendations in their guidance?
   f. How effective do they think was the top-down dissemination strategy for the workplace guidance in acute Trusts?
   g. If NICE had more resources, would they change this top-down strategy?
   h. Do they think the 'top' in acute Trusts is effective at disseminating the workplace guidance throughout the Trust?

8. How do the strategies for dissemination and implementation relate to each other?
   a. Are the strategies separate? The same? Linked?
   b. How much contact do the people in charge of dissemination have with the people in charge of implementation?

9. How does NICE encourage acute Trusts to implement the workplace guidance?
   a. How much influence does NICE have?
   b. What are the strategies and techniques that are used?
   c. How much encouragement or persuasion is needed?
   d. Do acute Trusts see that the guidance is for them?

e. Have acute Trusts given an indication that they're enthusiastic in implementing the workplace guidance? (In what ways? If not, what may be the reasons?)
   f. What are the arguments/business cases that are given?
   g. How much pressure can NICE put on Trusts given that NICE also wants Trusts to engage in the development of the guidance?
   h. What has proved successful in encouraging them to implement the guidance?
   i. What has proved unsuccessful?
   j. When the implementation team go around acute Trusts, what percentage of their time is spent talking about the workplace guidance? Does the workplace guidance come up? If so, who is it raised by?
   k. Have any acute Trusts approached NICE for help with implementing the workplace guidance?

10. How do outside factors influence the way NICE goes about disseminating and implementing the guidance in acute Trusts?
    a. Are there factors that make things easier? (e.g. Boorman Review)
    b. Are there factors that make things difficult? (e.g. budget constraints)
    c. Are outside factors considered in the dissemination and implementation strategies?

11. Are there any differences between the two pieces of guidance in the context of dissemination and implementation?
    a. E.g. how they are handled? Different people involved?
    b. Has the way NICE deals with the workplace guidance changed over time? (if so, why and in what ways? If not, why not?)
    c. Differences in barriers and facilitators?
    d. Differences to how they were received?
    e. Differences in outside factors? (e.g. a more receptive environment for one of the guidance; Boorman and Black Reviews)
    f. Does implementation strategy change for every guidance?

12. Can you describe what NICE sees as the value behind the implementation toolkit?
    a. How was the toolkit developed?
    b. Were any groups consulted in the development of the toolkit?
    c. Was it tested?
    d. Was anything else considered to be included in the toolkit?
    e. Are there plans to update the toolkit? Why? Why not?
    f. Who would benefit from the toolkit in the Trusts? Why?
    g. How important is the toolkit for successful implementation?
    h. What was the rationale for separating the toolkit from the main guidance?
    i. Who in acute Trusts is the toolkit aimed at

Barriers and facilitators

Aim: to identify the barriers and facilitators to dissemination and implementation of NICE workplace health and wellbeing guidance

13. What are the essential factors that determine whether an acute Trust effectively disseminates and implements the NICE workplace health and wellbeing guidance?
    a. What is good dissemination reliant on?
    b. What is good implementation reliant on?
    c. The role of money, expertise, high-level buy-in, engagement
    d. Characteristics of Trusts that have had the most difficulty or ease
    e. Is successful or poor dissemination and implementation contextual?
    f. Would NICE like to see anything in place in acute Trusts that would improve dissemination and implementation of the workplace guidance?
    g. Differences between guidance

14. Focusing specifically on dissemination - what do you think helps and gets in the way with the dissemination of the workplace guidance in acute Trusts
    a. What has been the biggest barrier NICE have encountered from acute Trusts?
    b. What are the characteristics of acute Trusts that have had the most difficulty in implementation?
    c. Content of the guidance?
    d. Badging of the guidance?
    e. NICE guidance is usually picked up first by Clinical Effectiveness departments in acute Trusts – is this a problem?
    f. Too prescriptive or vague?
    g. Resources – cost/personnel/time
    h. Who in the Trust needs to own/be on board/give buy-in for the guidance to be effectively disseminated?

15. Focusing specifically on implementation - what do you think helps and gets in the way with the implementation of the workplace guidance in acute Trusts
    a. What has been the biggest barrier NICE have encountered from acute Trusts?
    b. What are the characteristics of acute Trusts that have had the most difficulty in implementation?
    c. Content of the guidance?
    d. Badging of the guidance?
    e. NICE guidance is usually picked up first by Clinical Effectiveness departments in acute Trusts – is this a problem?
    f. Too prescriptive or vague?
    g. Resources – cost/personnel/time
    h. Who in the Trust needs to own/be on board/give buy-in for the guidance to be effectively implemented?

16. Is there anything new or of added value within the mental wellbeing or physical activity guidance for NHS acute Trusts?

      a. What are the short-term benefits to acute Trusts?

      b. What would be the costs for acute Trusts for not implementing the mental wellbeing guidance?

      c. What would be the costs for acute Trusts for not implementing the physical activity guidance?

17. What has NICE learned from disseminating and implementing the workplace guidance in acute Trusts that will them in the dissemination and implementation of future workplace guidance?

Suggestions

Aim: to get respondent's thoughts on how to improve dissemination and implementation of the guidance

18. Going forward, do NICE have a strategy to improve the implementation of its workplace guidance by acute Trusts?

19. What they think Trusts should do to disseminate and implement its workplace guidance effectively?

20. Anything else they think is relevant?

Appendix K – Recommendation-specific feedback from NICE fieldwork reports

Recommendation-specific comments for the physical activity guidance (Greenstreet Berman, 2008)**:**

- Participants felt that some of the recommendations in the guidance were too broad (recommendations 1 and 2), whilst other recommendations in the guidance were too specific (recommendations 3 and 4).

- Larger organisations felt that recommendation 1 was able to be integrated into their policies, whilst smaller organisations felt that an entirely new policy would have to be written to meet this recommendation.

- Participants were unclear about the wording of recommendation 1, for example, what 'multiple approaches' meant.

- Participants raised a number of concerns about health checks in recommendation 2, such as what was meant by a health check and who was qualified to perform the health check

- Organisations wanted more examples in recommendations 3 and 4 in order to tailor the recommendations to all members of their workforce

- Concerns were raised about the sustainability of recommendation 3

- There were a number of significant barriers identified to ensure that recommendation 4 could be integrated to all industry sectors

Recommendation-specific comments for the mental wellbeing guidance (Greenstreet Berman, 2009)**:**

- There was concern that recommendation 1 was too long

- Some participants felt that recommendations 1 and 2 had significant overlaps, and should be merged

- Participants wanted NICE to address the interactions between recommendation 3 (flexible working) and 4 (line manager's role); for example, how managers can manage effectively when their staff are in different working locations

- Recommendation 5 (SMEs) was seen as not fitting with the rest of the guidance, and participants suggested that it should either be deleted and incorporated into the other recommendations or have a separate set of recommendations for SMEs

- There was concern that the recommendations did not reflect NICE's definition of 'wellbeing'. In particular, it was felt that whilst the definition described wellbeing as a holistic approach to promoting wellbeing, the recommendations advocated risk mitigation.

- Participants, particularly from SMEs, felt that the recommendations were filled with too much 'management speak', with phrases such as 'risk management', 'strategy' and 'organisation-wide'

- The word 'feasible' in recommendation 3 (flexible working) was seen as inappropriate and participants felt that it should be replaced with 'practical' or 'reasonably practical'

Appendix L – Outline of debates regarding sample size in qualitative research

Saturation is a common aim in non-probabilistic sampling and means that interviews will reach diminishing returns when new interviews begin repeating themes in the data already collected and little or no new thematic data is obtained for each new interview (Guest, Bunce and Johnson, 2006). This means that estimating the number of interviews required is intertwined with estimating when saturation will be reached. However, whilst thematic saturation is considered a 'gold standard' for purposive samples, 'there have been few guidelines on how to establish whether one has in fact achieved saturation and few guidelines for determining the size for non-probabilistic purposive samples' (Bryman, 2012, p.18). Whilst the best method of sampling interviews is to simply stop once saturation is reached, the practicalities of research protocols and need for advance funding and project planning mean that an estimation prior to beginning an interview is required (Baker and Edwards, 2012; Adler and Adler, 2012; Guest, Bunce and Johnson, 2006).

Some authors have appeared to recommend arbitrary numbers for appropriate sample sizes, based on their experience and perception of publishing requirements. For example, Adler and Adler (2012) recommend between 12 and 60 interviews, with 30 being the mean. Bryman (2012) points to the wide variation in what is deemed the minimum requirement for a quality study, citing Warren's (2002, cited in Bryman, 2012) argument that more than 20 interviews are required for a purely interview-based qualitative study to be published, and also citing Gerson and Horowitz's (2002, cited in Bryman, 2012) argument that 60 interviews are needed to convincingly support conclusions. Charmaz (2012) and Doucet (2012) are equally pragmatic, arguing that an appropriate sample size depends on the career stage of the researcher, their analytical ambitions and the community reviewing the study (those used to more quantitative studies, for example, are likely to require more interviews to satisfy their epistemological and methodological norms).

Other authors have argued that the appropriate number of interviews would depend on the purpose of the research (Baker and Edwards, 2012). One interview may be enough to give a rich account of a unique event (as in the case of oral history), a few may be enough if the purpose is to highlight that an issue is more complex than previously thought, while more may be required if the purpose is to provide a rich conclusion (Becker, 2012). Baker and Edwards (2012) argue that this means that 'in order to decide how many qualitative interviews is enough the researcher must interrogate the purpose of their research' (p.5). In similar fashion, Bryman (2012) argues that sample size matters less than the justification for the size, taking into account research objectives, resources and analytical framework. Equally, Brannen (2012) argues that it is not only the sample size that is important but case inclusion as well. There is no point in having a large sample size if the researcher does not interview the most relevant people for the project.

Mason (2012) cautions against what she describes as the 'knee-jerk' reaction that more interviews are always better. Indeed, Adler and Adler (2012) state that conducting too many interviews may not only be unnecessary and time consuming (both in conducting interviews and in transcribing and analysing interviews) but also unethical as it would waste resources as well as participant time. Furthermore, conducting too many interviews may reduce the time given to the analysis of data and therefore reduce the quality of analysis. In qualitative research, it is the depth and complexity of analysis rather than a large sample size per se that ensure conclusions and explanations are strong and convincing (Mason, 2012). Similarly, Sandelowski (1995) argues that 'an adequate sample size in qualitative research is one that permits – by virtue of not being too large – the deep, case oriented analysis that is a hallmark of all qualitative inquiry, and that results in – by virtue of not being too small – a new and richly textured understanding' (p.183). This, she argues, is achieved by balancing the quality of information gathered against the research objectives and methods. This means that the appropriate sample is contextual to each project, implying that emphasis should be placed not only on how many interviews are enough to reach saturation, but also on whether in reaching a sample size the

researcher has been fully transparent so that the 'appropriateness' can be reviewed (Baker and

Edwards, 2012).

Appendix M – Selected responses from NICE's stakeholder consultation

Selected responses for the stakeholder consultation for the physical activity in the workplace guidance

Source: NICE, 2008f

- Bedfordshire PCT suggested that the recommendations should identify a lead person to identify and implement the guidance. NICE believed that this was "a little too restrictive given the variety of structures within organisations"

- BT Group plc. stated that for the recommendations to separate out employers into positions such as HR Director and senior managers "displays a fundamental misunderstanding of business structures. The term "employer" is all encompassing and the attribution of responsibilities within any organisation is an internal matter which it is inappropriate for this sort of guidance to comment upon". Although NICE acknowledged the statement they emphasised that the "guidance seeks to stress the need for buy-in by high level managers, whatever the organisation size or structure".

- BT Group plc. was one of the most critical stakeholders of the NICE guidance. In addition to the criticism above, they re-emphasised that the NICE guidance was too prescriptive and that "the optimum methodology for implementation of any guidance is an issue for companies to address themselves". This is an interesting comment as NICE intended the guidance to allow for flexibility, and when faced with a later comment made by Liverpool PCT, NICE stated that they "did not want the guidance to be too prescriptive" as they aim to maximise applicability to a variety of organisational structures. This shows the difficulty NICE has in considering implementation for both the public and private sectors, and organisations of varying sizes, all of whom may have different views on how flexible implementation should be and the flexibility of implementation advice.

- BT Group plc. also mentioned that the NICE guidance was "second guessing how a business might be structured (e.g. occupational health departments exist in only a tiny minority of companies) and this undermines the credibility of the guidance". They gave the example of the recommendation regarding lifts and stairs, and stated that it was "laughably inappropriate and must be stated as purely and [sic] example of what might be done". Ultimately, BT believed that the guidance should give organisations greater scope for contextualisation in order to legitimise the implementation process, and that "companies are best placed to determine the optimum means of communication with their own people and the guidance is yet again too prescriptive".

- Both the Department of Work and Pensions and Department of Health mentioned that the guidance itself did not demonstrate the benefits to businesses for implementing the guidance and that a summary business case for employers highlighting the costs and benefits of implementing a physical activity scheme should be included. NICE stated that the business case for implementing their guidance is produced as part of the separate implementation toolkit.

- The Department of Health believed that implementing the physical activity guidance would not require any or significant investment. This was noted by NICE.

- The Health and Safety Executive (HSE) included a number of comments to the stakeholder consultation. One of the comments echoed those made by The Department of Work and Pensions and Department of Health, by stating that a clear business case needed to be made for implementing the recommendations otherwise employers would not take the guidance seriously. Similarly, the HSE suggested that the guidance would only be implemented if it was made clear to employers (of all sizes) what the upfront and running costs of implementing the recommendations are compared with the benefits to be gained. NICE stated that a costing

tool was available for businesses which would highlight the business costs and benefits of implementing the guidance.

- The HSE also stated that, amidst other business priorities, employers were unlikely to implement voluntary recommendations if there were no incentive schemes or system for monitoring implementation. NICE highlighted that the role of NICE was not to produce incentive schemes over and above the business case that is set out and the business costing tool.

- The Institute of Health and Society at Newcastle University, stated that even at an industry level, cost estimates and examples may help with management decisions. NICE reiterated that the implementation toolkit that comes with the guidance on the website provides a costing tool.

- Shropshire County Council suggested that the rhetoric of reduced sickness absence and improved cost-effectiveness should have examples, otherwise employers would not see the guidance as a priority. NICE again pointed to the implementation toolkit and business case that accompany the guidance.

It should be noted that the above comments are only a handful of a number of stakeholder responses. Most of the responses were centred on the evidence behind the recommendations – for example, responses would suggest alternative references or state that there is evidence of other effective interventions. Relatively few responses focused on implementation of the recommendations in real-life settings. However, it should also be noted that NICE were open to changing their guidance in light of some stakeholder responses, and some responses complimented the raison d'être of the guidance as well as the recommendations.

Selected responses for the stakeholder consultation for the mental wellbeing in the workplace guidance

Source: NICE, 2009j

- The British Association for Counselling and Psychotherapy stated that organisations may find Recommendation 1 difficult to implement without knowing what organisation-wide approaches or specific individuals were effective for implementing the recommendation. NICE responded by saying that the guidance acknowledged that individual contributions have a role to play.

- The Chartered Institute for Personnel and Development (CIPD) made a number of comments for their stakeholder response. For example, they were concerned that the guidance would be "lost" among other similar mental wellbeing initiatives, and argued that NICE needs to position and market the guidance in a way that fits with comparable policies. In particular, the CIPD suggested stronger reference needs to be made to the Health and Safety Executive's (HSE) Stress Management Standards and the legal duty employers have to conduct a risk assessment for stress, as well as reference to the management competency framework developed by the HSE, CIPD and Investors in People. NICE responded that they were working to ensure that the guidance is set within the context of relevant national initiatives and that it would complement similar work in this area. It added a reference to the management competency framework in its revised guidance. Furthermore, its Implementation Directorate would consider greater links to HSE's stress management standards and the management competency framework when it develops its implementation support tools.

- The CIPD also argued that a stronger business case needs to be made to encourage employers to invest in promoting employee mental wellbeing, and that the business case should focus on the financial costs and benefits. They further suggested that "the language used in the guidance is less academic and more user-friendly, with a greater emphasis on practical support for business and organisations". NICE responded by stating that they made a number

of changes to the guidance to make it more accessible, and that the business case would be emphasised as part of the costing tools in its implementation toolkit.

- The Faculty of Occupational Medicine appeared to not see the relevance of the NICE guidance, stating that "large companies are likely not to require the advice [having already responded to the HSE`s guidance], while small to medium companies, who are likely to be already struggling in the current financial climate, will be placed under further pressure to provide that for which they cannot have the resource". NICE responded by stating that they anticipate companies of all sizes would benefit from the guidance, although they acknowledged the resource constraints may be an issue.

- The Learning and Skills Council suggested that case studies should be included, particularly the 'Mindful Employer' initiatives that are being implemented. NICE responded by stating that case studies would be considered as part of its implementation toolkit.

- The Mental Health Nurses Association argued that an implementation toolkit should be used to champion and disseminate the guidance, which suggests that they were unaware that NICE uses implementation toolkits for its guidance. NICE did not respond to this particular stakeholder comment.

- Echoing some of the points made by the Learning and Skills Council, Mind and the British Psychological Society argued that the guidance requires practical suggestions to how employers could implement the guidance, and best practice examples and case studies to highlight the benefits of implementation. This suggestion was reiterated by the North East Chamber of Commerce, who wanted the guidance to include case studies of innovation and proactive steps to improve mental wellbeing from a range of industries. NICE responded by stating that the recommendations have been amended to include further practical advice, and that practical suggestions and case studies will be included as part of its implementation toolkit.

- North East Regional Workplace Health Group stated that the guidance "is for employers but it is not really employer friendly. It needs to be a couple of sides of A4 for an employer - heavily targeted on why they should do it (financial reasons)". NICE responded by saying that they will consider the suggestion when developing the implementation toolkit.

- North East Regional Workplace Health Group stated that the guidance "is too long and uses too much 'Civil Service' or 'Government' speak, and sadly appears without real employer input on its research groups". NICE responded by saying that they consulted employer and employee representatives during the development of the guidance.

- The Sainsbury Centre for Mental Health and the British Psychological Society both wanted more clarity and precision in the target populations for the NICE guidance. NICE responded by saying that they have specified the main groups who should take action for the recommendations, but that they do not want to be too specific.

- The Learning and Skills Council wanted more flexibility in the target population, arguing that it should be left to employers to decide who should take action for the recommendations. NICE responded by stating that some examples of job titles to take actions helps provide clarity.

- The British Psychological Society suggested a number of points they believed would help in the implementation of the guidance. Some of the points reiterated those above, such as being specific and detailed in how recommendations could be implemented and how they are relevant to organisations; motivating managers to implement the guidance by stating the benefits to managers of implementation; increasing the focus on business benefits and having strong business cases to allay anxieties around implementation. They also pointed out that whilst NICE is an authority in the medical domain, they have less impact across management and organisations, and that promoting mental wellbeing needs to be owned by executive

levels in the organisation in order to create culture change. NICE responded by stating that they will pass on these suggestions to the Implementation Directorate.

As with the stakeholder comments for the physical activity in the workplace consultation document, it should be noted that the above comments are only a handful of a number of stakeholder responses. Most of the responses were centred on the evidence behind the recommendations. Relatively few responses focused on implementation of the recommendations in real-life settings. It should also be noted that NICE were open to changing their guidance in light of some stakeholder responses, and some responses complemented the guidance as well as the recommendations.