An exploration of cultural issues affecting staff compliance with recommended infection prevention and control practices in a 'ring-fenced' acute hospital elective surgical ward

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ABSTRACT

Healthcare associated infection (HCAI) poses a serious threat to patients admitted into hospital as well as health care staff. Whilst recommendations for preventing HCAI exist, many research studies, primarily quantitative in nature, have reported serious concerns about the suboptimal infection prevention and control (IPC) practices adopted by healthcare workers (HCWs) within acute clinical settings. However, there remains a lack of understanding about why suboptimal practices persist. Although quantitative studies have identified poor staff compliance with the IPC recommended practices, attempts to tackle the problem have yielded limited success. It is suggested that a key reason for this is the failure to take into account the cultural context in which the non-compliant behaviours take place.

This qualitative study, guided by ethnographic principles, uses a combination of focus groups and individual interviews with frontline staff and organisational leaders to explore cultural issues affecting staff compliance with recommended IPC practices in a ring-fenced acute hospital elective surgical ward (ESW).

The study reveals that noncompliance with IPC policies and procedures in the ESW was legitimised and subsequently tolerated by both frontline and managerial staff, especially when the acute hospital was under stress. In

particular, the ESW operational ring-fencing policy for protecting elective surgical patients from HCAI acquisition was repeatedly breached due to the conflicting pressures and competing demands of a busy hospital environment.

The findings challenge the sustainability of the policy of ring-fencing the ESW as a discrete component of a busy acute hospital in order to protect elective surgical patients from HCAI in the context of the current healthcare system. It is highly likely that, as people live longer due to advances in medicine and technology, the demand for trauma and medical emergency beds will increase in the future, rendering the ring-fencing of any bed unsustainable in an acute hospital setting.

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Abbreviations

BBE Bare below the elbows

C difficile *Clostridium difficile*

CQC Care Quality Commission

DH Department of Health

DIPC Director of Infection Prevention and Control

ESW Elective Surgical Ward

FG Focus Group

HCAI Healthcare Associated Infection

HCW Health Care Worker

HPA Health Protection Agency

IPC Infection Prevention and Control

IPCNS Infection Prevention and Control Nurse Specialist

ICNA Infection Control Nurses Association

IPCT Infection Prevention and Control Team

MRSA Methicillin Resistant *Staphylococcus aureus*

NAO National Audit Office

NHS National Health Service

NMC Nursing and Midwifery Council

PHE Public Health England

RCT Randomised Controlled Trial

WHO World Health Organisation

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CHAPTER 1: INTRODUCTION

1.1 Rationale for the study

My motivation for, and interest in, exploring this topic was influenced by my observations concerning poor staff compliance with the basic IPC precautions in everyday clinical practice. During one of my ward rounds, I noticed Vera (fictitious name), a newly qualified nurse on a surgical ward not washing her hands thoroughly as outlined in the hospital IPC policy, after coming into contact with patients. She washed the tips of her fingers only. The most striking feature to me was that she did not use soap, despite it being readily available on the hand washing basin that she used. I found this omission worrying as Vera was about to become a role model for student learners. Consequently, I challenged her suboptimal practice.

After speaking with Vera, I ascertained that she knew that the transmission of bacteria by hand contact is one of the main causes of cross infection in the hospital environment. Furthermore, she acknowledged hand washing as one of the most important procedures in the prevention and control of infection in hospitals. However, contrary to this, she did not comply with proper hand washing procedures in practice. I pointed out to her that exposing patients and work colleagues to the risk of infection or any harm that could result from personal negligence, which in this case took the form of poor hand washing, contravened her legal duty as a professional practitioner (Nursing and Midwifery Council (NMC) 2010). In hindsight, I remember asking myself this

question: “Why did Vera not wash her hands properly using soap even though she realised the importance of hand washing in preventing infections?”
This is just one of several scenarios involving poor staff compliance with measures put in place to prevent HCAI that I have encountered in my daily work as an Infection Prevention and Control Nurse Specialist (IPCNS). Ultimately, my concern about patient care and safety from an IPC viewpoint was the prime reason for choosing this topic for my doctoral dissertation. Hand hygiene is considered one of the most important standard precautions to stop the spread of infection (Mazi et al 2013), yet studies conducted worldwide show that HCWs, as demonstrated by Vera in this scenario, do not always wash their hands as they should (World Health Organisation (WHO) 2009; Pittet et al 2009; Joint Commission 2009). In effect, compliance with recommended IPC practices is suboptimal both in the UK and internationally (Valim et al 2014). Poor staff compliance culture with the recommended IPC practices is a significant contributory factor to complications such as increased length of hospital stay, morbidity and mortality attributable to HCAI (WHO 2011).

1.2 Background

In this study, the term ‘healthcare associated infection’ is defined as any infectious agent acquired after 48 hours or more of hospitalisation as a consequence of a person’s treatment by a healthcare provider, or which is acquired by HCWs in the course of their duties (National Audit Office (NAO) 2009). This infection is neither present nor incubating when a patient enters

the hospital. Although not all HCAI is avoidable, it can be substantially minimised through good practice and consistent staff compliance to robust IPC measures, and it is assumed that 15%-30% of cases could be prevented in this way (NAO 2009).

HCAI is a major challenge and one of the top healthcare priorities linked to patient care quality and safety in the UK National Health Service (NHS) and the rest of the world (Dyson et al 2011; WHO 2011; Flodgren et al 2013; Hughes et al 2013). Approximately 1.4 million people worldwide contract infection in hospital on a daily basis (Pittet et al 2009), triggering human suffering that ranges from minor discomfort to serious disability and death. At least 300,000 patients pick up an infection during their stay in a UK hospital each year (NAO 2009). The financial cost to the UK NHS attributable to HCAI is estimated to be over £1 billion each year. HCAI also impacts on bed capacity because affected patients tend to stay longer in hospital.

During the late twentieth century, the NHS faced challenges posed by the emergence of strains of micro-organisms resistant to many antibiotics commonly used to treat certain infections. This became a major threat to the safety of patients admitted into hospitals (NAO 2009). Consequently, tackling HCAI became a matter of priority for the UK government, the NHS and the public. In April 2009, as part of the Health and Social Care Act 2008, the Hygiene Code of Practice came into force and placed a legal obligation on all NHS organisations to ensure that patients are cared for in a clean

environment, where the risk of infection acquisition is kept to an irreducible minimum (Care Quality Commission (CQC) 2015).

The CQC has a statutory duty to inspect and monitor NHS providers' compliance with the Hygiene Code of Practice regulations (DH 2015). It operates a registration system and has powers to prosecute care provider institutions that seriously breach registration requirements. In effect, the Hygiene Code of Practice (DH 2015) has challenged acute hospitals to abandon the culture that placed responsibility for IPC with the Infection Prevention and Control Team (IPCT) for several years. Compliance with legislation now underpins an organisation's strategy for reducing HCAI. Ultimately, the chief executive and the hospital trust board are now legally responsible for signing off compliance against the Code of Practice (NAO 2009). For instance, the chief executive of Maidstone and Tunbridge Wells NHS Trust escaped charges of corporate manslaughter following ninety *Clostridium difficile (C difficile)* deaths during an outbreak that took place between 2004 and 2006 (Healthcare Commission 2007). Although criminal proceedings were dropped due to lack of evidence suggesting manslaughter, this case had national ramifications which focussed the minds of hospital chief executives across the UK on establishing organisational processes that would ensure the development and maintenance of high standards of IPC and cleanliness in the clinical environment.

More importantly, legislation now demands that everyone working in the healthcare environment should take responsibility for IPC, implying that every

HCW has a role to play in helping to prevent the spread of infection. In cases like Vera's, failure to comply correctly with basic standard principles such as hand hygiene can lead to devastating effects for both patients and organisations. Despite regulations, legislation, increased publicity and the publication of guidelines designed to restrain HCAI, suboptimal compliance with good IPC practices in inpatient settings persists (Flodgren et al 2013; Hughes et al 2013). The next chapter contains a review of the literature related to IPC that underpins the purpose and rationale for conducting this research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This literature review considers factors emerging from previous research that affect HCWs' compliance with recommended IPC practices. It evaluates studies that have tested the effectiveness of interventions aimed at illuminating the disparity between healthcare professionals' behaviour and local institutional policies, including national and global initiatives for preventing HCAI. The review begins by defining the IPC related terms used in this study, followed by a description of the search strategy and a discussion of obstacles to and facilitators for implementing recommended IPC practices. Thereby, it demonstrates that compliance with IPC recommendations among HCWs in inpatient settings remains a problem across all healthcare specialties globally.

2.2 Definition of terms

There appears to be a lack of consistency in the terminology used by different authors to describe strategies and interventions designed for the prevention and control of infection, which can be confusing, as highlighted by Crawford Cohen et al (2015). Ultimately, what the various scholars within the field are referring to are practices, behaviours and measures for combating HCAI. In order for these interventions to work, HCWs' actions must correspond to IPC recommendations (Loveday 2014). For the purpose of this study, the term

‘IPC practices’ is used synonymously with the terms ‘IPC recommendations’, ‘IPC measures’, ‘IPC requirements’, ‘standard precautions’, ‘standard principles’, ‘universal precautions’ and ‘contact precautions’. In addition, the term ‘compliance’ is used synonymously with the term ‘adherence’ in reference to the extent to which a multiprofessional team working together in a ring-fenced acute hospital elective surgical ward follows IPC recommendations for preventing the spread of HCAI. The term ‘ring-fenced’ indicates that elective orthopaedics and surgical care are separated from other inpatient services through the use of dedicated beds (Kelly et al 2012). In this study, it means that the ESW contains protected beds which, in theory, are dedicated solely for patients undergoing elective orthopaedic procedures, primarily joint implants and clean surgical operations, to prevent HCAI acquisition.

According to the literature, culture is a difficult concept to define because it has multiple meanings, which has resulted in various people interpreting the term in different ways (O’reilly 2012; Spencer-Oatey 2012). Although it is beyond the scope of this literature review to define culture in all its diverse meanings, for the purposes of this study, the ring-fenced ESW’s multiprofessional team and its management structure is considered to constitute a culture group. Furthermore, the word ‘culture’ is used in this study to denote the meaning expressed by some authors as ‘the way things are done around here’ (Schein 2010; O’reilly 2012).

2.3 Search strategy

The literature review was conducted between 2009 and 2015, although the majority of it was undertaken between 2009 and 2011. A search of local, national and international research and policy documents published within that period was conducted using search terms and keywords formulated from the research question. Initially, the Cochrane database of systematic reviews was searched in an attempt to find the highest level of evidence pertaining to IPC practices adopted by HCWs in clinical settings. Only 5 out of a total of 34 relevant titles returned by the search were selected as the rest related to treatment effectiveness and therapeutic interventions and were thus excluded. The majority of the articles were subsequently retrieved from Medline, Cumulative Index to Nursing and Allied Literature (CINAHL), and British Nursing Index (BNI) as these databases are designed to meet the needs of medical, nursing and allied health professionals.

Database	Key words and their related search terms	Results
1 CINAHL	“cultural issue$”	26145 articles
2 CINAHL	"healthcare worker$"	174714 articles
3 CINAHL	“compliance”	58792 articles
4 CINAHL	"infection control ”	8943 articles
5 CINAHL	“ring fence$”	70 articles
6 CINAHL	“elective surgical ward$”	140741 articles
7 CINAHL	1 and 2 and 3 and 4 and 5 and 6	0 articles
8 MEDLINE	1 and 2 and 3 and 4 and 5 and 6	0 articles
9 BNI	1 and 2 and 3 and 4 and 5 and 6	0 articles

Table 1: Search strategy summary

The search terms ‘cultural issues’, ‘infection control’, ‘compliance’, ‘healthcare workers’, ‘ring fence’, ‘elective surgical ward’ and their alternative terms were initially entered into a CINAHL database, and each returned a vast amount of results, as summarised in Table 1. The Boolean operator ‘AND’ was then used to combine these key terms to make them more specific to the research question with the aim of refining the initial high volume of publications into a manageable number of articles, but the search produced a nil return. Therefore, in an attempt to further identify existing literature tailored to IPC related cultural issues in ring-fenced elective surgical units, the search terms ‘ring-fenced’, ‘elective surgical ward’ and their related terms were combined with the Boolean operator ‘AND’ and 10 articles were retrieved. Out of these, 4 were IPC related.

As the literature search produced no previous research papers specifically exploring IPC-related cultural issues within a ring-fenced setting combining elective surgical and orthopaedic specialties, as shown in Table 1, a decision was made to include previous papers that focussed on HCWs' compliance with IPC practices in other inpatient settings which could be applicable to this research setting. Hence, 171 items were generated from CINAHL, 330 from Medline and 5 from BNI database searches, as demonstrated in the example presented in appendix 1. The articles were selected by scanning abstracts of titles and only those that pertained to HCWs' IPC behaviours in the healthcare environment were included in the review. Some of the articles were easily accessible from full text online resources and others were requested from the local healthcare library. A reference list of each retrieved paper was searched for relevant material.

Additionally, journals which produce a wealth of relevant IPC material, particularly the Journal of Infection Prevention, American Journal of Infection Control and the Journal of Hospital Infection, were searched in both hard copy and electronic formats. Supplementary searches were undertaken at the local NHS and RCN libraries to ensure that optimal relevant evidence was captured, especially in the case of peer-reviewed, research-based professional journals like the Journal of Advanced Nursing and many more. Grey literature was identified from national and international public health websites, including World Health Organization (WHO), Department of Health (DH), Centers for Disease Control and Prevention (CDC) and Health Protection Agency (HPA) (now Public Health England (PHE)). There was no

restriction on the publication date although only studies published in English were considered.

A total of 69 papers were finally included in this literature review with the majority of the evidence emerging from non-randomised studies. This seems to reflect a paucity of high quality evidence needed to interpret the effectiveness and efficacy of IPC strategies and interventions with certainty in fighting HCAI, as reported in the literature (Gould et al 2010; Flodgren et al 2013) However, it is also recognised that conducting IPC related randomised controlled trials (RCTs) in inpatient settings is challenging logistically, methodologically and ethically (Edwards et al 2012: Huis et al 2013). Nonetheless, despite the dearth of quality, the reviewed previous studies demonstrate that consistent compliance with the recommended IPC practices among HCWs in clinical settings remains elusive across all healthcare specialties globally, including ring-fenced elective units.

2.4 Suboptimal practices: a continuing problem in IPC

In IPC practice, consistent staff compliance with the standard principles incorporated into evidence-based guidelines and policies is believed to significantly improve patient safety and quality of care (The National Institute for Health and Care Excellence (NICE) 2012; Loveday et al 2014; VanSteelandt et al 2015). These IPC measures include good hand hygiene, correct use of personal protective equipment (PPE), isolation of infectious patients, effective decontamination of equipment and the environment, and

the correct handling and disposal of waste and sharps (Loveday et al 2014; The Health Foundation 2015). Every HCW has a legal duty of care to comply with these basic precautions which are recommended as effective means of preventing HCAI in line with the Health and Social Care Act 2008 (DH 2015). However, several previous research papers which were reviewed to underpin this study suggest that HCWs' adherence to IPC policies and guidelines remains inadequate, despite a variety of interventional programmes (Gilbert et al 2010; Efstathiou et al 2011; Edwards et al 2012; Ward 2012; Mazi et al 2013; Jackson et al 2014; VanSteelandt et al 2015; The Health Foundation 2015). For instance, hand hygiene continues to be regarded as the single most effective way to prevent HCAI but compliance rates rarely exceed 50% among hospital HCWs (Gilbert et al 2010).

According to the literature, obstacles exist that mitigate against HCWs' consistent compliance with IPC measures which are influenced by individual and organisational factors in the healthcare environment (Gould et al 2010; Edwards et al 2012; Ward 2012; Jackson et al 2014), including ring-fenced elective surgical / orthopaedic settings (Briggs 2015) . These barriers and suggestions for how they may be overcome are discussed in the following section starting with the challenges to implementing a ring-fencing strategy in elective surgical and orthopaedic units, which is the focus of the current study.

2.4.1 Ring-fencing strategy

According to a national review of adult elective orthopaedic services in England (Briggs 2015), dedicated units for elective orthopaedics and other elective surgery should be acknowledged as the essential standard required for the provision and delivery of safe, high quality and cost-effective care for patients in clinical practice, including IPC. Protecting elective inpatient beds by operating a ring-fencing policy plays an important role in achieving this standard. As Soler et al (2013) point out, ring-fencing was initially introduced in elective orthopaedic wards as a strategy for decreasing MRSA infection in elective hip and knee procedures. Previously, Biant et al (2005) argued that ring-fencing minimises the chances of infection for patients undergoing clean orthopaedic surgery because they are managed by a dedicated workforce following a strict operational protocol which includes stringent IPC measures.

Although the ring-fencing strategy is recommended by orthopaedic experts as best practice for tackling HCAI in elective orthopaedic patients, Briggs (2015) expresses concern that it is regularly breached in many UK hospitals. However, no strong evidence was found in the literature to substantiate the efficacy of the ring-fencing strategy in elective surgical or orthopaedic settings on the reduction of infection rates when implemented as a sole measure. Instead, both earlier and very recent previous studies that have demonstrated a reduction in infection rates acknowledge that this has been achieved by simultaneously combining the ring-fencing model with other IPC measures such as early detection and eradication of MRSA carriage in elective patients,

patient isolation and education campaigns to raise IPC awareness among staff (Coyle 2012; Kelly et al 2012; Barlow et al 2013; Soler et al 2013).
In the face of increasing demand for emergency care attributed to an ageing population and constrained resources due to government imposed financial austerity in the UK NHS (Dimitriadis et al 2013) the ring-fencing approach to managing elective surgical patients is declining or, where it is still applied, is regularly breached by management teams (Briggs 2015). This seems unsurprising given that the strategy sometimes interferes with the smooth running of busy hospitals, particularly as its impact on reducing infection rates to patients still remains unproven. It could be argued that skepticism about IPC-related benefits associated with this strategy may result in a lack of commitment by managers to implementing robust ring-fencing policies in healthcare environments beset by competing demands and restricted resources.

Interestingly, a study by Whitehouse et al (2008) investigating the cancellation of elective work associated with bed crises in their organisation appears to suggest that the ring-fencing strategy worked more effectively when the elective surgical unit in question was physically removed to a separate geographical location away from the main busy acute hospital. However, no similar previous studies relating specifically to IPC were found in the literature, making it difficult to draw any comparisons. What the literature does show is that beliefs and attitudes can influence the behaviours of frontline HCWs, and hence their compliance with IPC best practice recommendations, as is discussed in the following section.

2.4.2 HCWs' beliefs and attitudes

Jackson et al (2014) argue that, in some instances, HCWs' behaviours bear no relation to the correct behaviours that they are taught and are instead determined by beliefs which shape attitudes that influence the decision-making process relating to compliance with recommended IPC practices. It has been argued by several researchers that appropriate responses to infection by HCWs occur when there is a perceived risk (Edwards et al 2012; Jackson et al 2014). A systematic review conducted by Valim et al (2014) revealed that compliance with IPC contact precautions by HCWs was greater only after they had touched potentially contaminated material. The studies mentioned above support earlier research by Whitby et al (2007) who describe two types of hand hygiene behaviour which are adopted in practice, implicating the notion of risk perception: 'inherent' and 'elective' behaviours.

According to Whitby and colleagues, on one hand, inherent hand hygiene practice is prompted when hands are visibly soiled, sticky or gritty, or after touching areas of a patient's body perceived to be unhygienic. On the other hand, elective hand hygiene practice refers to hand cleansing opportunities that occur where hands are not visibly dirty but that present a risk of cross-transmitting organisms in the healthcare setting, for example, checking a pulse or coming into contact with inanimate objects in the patient environment. The contact associated with elective hand hygiene practice does not trigger an intrinsic need in the individual to cleanse their hands (Whitby et al 2007).

Similarly, Gralton et al (2013) examined HCWs' perceptions relating to the uptake of PPE and found noncompliance to be driven by a perception that undertaking this IPC measure hindered the performance of their daily tasks. Kaur et al (2014) reported reduced levels of compliance with IPC precautions among clinicians whose intention was merely to observe procedures and not to have patient contact. It could be argued that HCWs develop skewed perceptions of the transmission of pathogenic organisms from one place to another in the absence of physical contact with patients because microorganisms cannot be seen by the naked eye.

Another perception-related factor that has been linked to suboptimal practices by HCWs, and doctors in particular, is scepticism about the efficacy of IPC precautions in reducing infection rates. UK hand hygiene policies recommend that all clinical professionals should be bare below the elbows (BBE) in the clinical environment, despite a paucity of research evidence to support the policy’s effectiveness in combating infection (Willis-Owen et al 2010; Burger et al 2011). BBE involves measures such as wearing short-sleeved clothing, wearing no wrist jewellery or rings with stones, and avoiding ties and white coats (DH 2010; Dancer 2012). Erasmus et al (2009) and Efstathiou et al (2011) reported that physicians blame their noncompliance on the scarcity of evidence-based research to substantiate the effectiveness of hand hygiene in the prevention of HCAI. Pursuit of further robust evidence from well-designed research studies has been recommended to convince HCWs of the efficacy of IPC interventions in reducing HCAI (Efstathiou et al 2011; Edwards et al 2012).

Previous studies have also identified a perception among some HCWs that suboptimal practices exist and persist because of an absence of institutional sanctions. A study carried out by Fredriksson et al (2011) in a Swedish healthcare setting reported a case where ‘naming and shaming’ was used as a compliance mechanism to try to persuade individual local authorities that had initially refused outright to implement a patient choice policy introduced by the government at a national level. Fredriksson and colleagues described ‘naming and shaming’ practices as those which involve an actor being identified in front of others as having performed badly. They assert that this compliance mechanism was clearly identified by their interviewees as being one of the factors that led them, as local implementers, ultimately to concede to national demands. Sanctions in the form of naming and shaming were also identified as levers for encouraging compliance with hand hygiene in a study carried out by Dyson et al (2011) which utilised a psychological theory. In another study conducted by McGaw et al (2012) in a Jamaican hospital, 37% of the participants recommended the implementation of sanctions to improve compliance with IPC guidelines. Whitby et al (2007) also reported similar findings in an earlier study.

In contrast, the literature also highlights the principle of clinical governance which encourages organisations to be open about their performance, move away from punitive and blame cultures and support their staff in learning from mistakes and adverse events in order to protect patients (Berwick Report 2013). Publishing good audit results, giving praise and issuing certificates were mentioned as incentives for promoting good staff hand hygiene

behaviours by the participants in Dyson et al's (2011) study. Lack of knowledge, which is discussed in the following section, is also identified in the literature as an important barrier linked to suboptimal staff compliance with IPC requirements.

2.4.3 Lack of knowledge

Education is regarded as one of the key strategies in preventing HCAI, based on the supposition that it increases HCWs' knowledge, which in turn improves practice. Efstathiou et al (2011) identify lack of knowledge as a source of noncompliance. They employed a qualitative research design to explore the factors that influence nurses' compliance with standard precautions for avoiding occupational exposure to pathogens. Their participants argued in favour of the timely availability of new information about protective equipment through educational programmes that emphasise the benefits of complying with precautions and the possible consequences of exposure to pathogens.

De Bono et al (2014) highlight lack of knowledge among HCWs as a result of a poor communication culture within an organization. These authors argue that without good communication mechanisms in the healthcare environment, staff will lack awareness and proper understanding about infection risks and what they should do to prevent them. In addition to the dissemination of IPC messages through good communication channels, De Bono et al (2014) suggest the need for effective education that empowers HCWs with knowledge and skills in order to give them confidence in their ability to

perform the desired behaviour.

In contrast, some studies suggest that knowledge does not always translate to staff compliance. Ward's (2011) literature review which aimed to identify the role of education in IPC found no rigorous and convincing evidence to substantiate the efficacy of education in ensuring compliance with IPC precautions or reducing infection rates. More recently, Mazi et al (2013) conducted a study in three critical care units to measure rates of hand hygiene compliance before and after an interventional campaign combining the WHO (2009) hand hygiene strategy and education. They reported an increase in staff compliance but this was not sustained in certain areas of critical care. Jackson et al (2014), who also investigated nurses' IPC behaviours in an acute hospital setting, reported that their participants demonstrated the knowledge and education required to understand the principles of IPC procedures, disease transmission and the risk associated with pathogens, but still failed to strictly adhere to HCAI guidelines.

However, some previous studies have implicated the contextual environment in which clinical practice takes place as a determinant that influences the IPC behaviours adopted by HCWs in a healthcare setting (Macbeth 2002; Ghaye 2005; Edwards et al 2012). Contextual variables that affect staff compliance from an IPC perspective have been linked to competing overlapping clinical demands, especially emergencies and organisational factors including the physical environment (Knoll et al 2010; Edwards et al 2012; Dixit et al 2013). These aspects are discussed in the next section, commencing with the impact of competing clinical activities, followed by organisational issues.

2.4.4 Competing clinical activities

Macbeth (2002) studied IPC practices in an intensive care unit and reported that alarms on medical equipment such as ventilators, cardiac monitors, infusion pumps etc., designed to alert care givers to patient safety problems, determined the focus of the HCWs as they provided care and ultimately took priority over IPC. In the same article, an example of poor IPC practice was given, whereby a clinician immediately responded to a ventilator alarm, turning it off while still wearing disposable gloves contaminated with body fluids from carrying out a procedure on another patient. The clinician's main concern was to silence the alarm without giving any consideration to the contaminated gloves. This example appears to support Ghaye's (2005) assertion that contextual problems require solutions tailored to respond precisely to that unique situation, which means that sometimes the practitioner has to deviate from rules that may be regarded as impractical at that juncture. Similarly, the interviewees in Knoll et al study's (2010) stated that the immediate need to provide a patient with emergency care constituted a valid reason for omitting to follow hand disinfection procedure.

In a qualitative study undertaken by Dixit et al (2013), exploring the attitudes and beliefs of individuals in a paediatric hospital, the failure to rigorously adhere to hand hygiene procedures was viewed as acceptable in medical emergencies, for instance, when an acute intervention was needed for a sick patient. In addition to situational competing clinical activities, certain organisational factors, particularly the institutional culture, performance

targets, high rates of bed occupancy, understaffing and excessive workload intensity are identified in the literature as having a bearing on HCWs' adherence to IPC policies and procedures. These are discussed in the following section.

2.4.5 Organisational Factors

2.4.5.1 Management

Murray and Holmes (2012) assert that micro level outcomes are shaped by the macro environment and wider socio-political forces influencing the organisation. Dixon-Woods et al (2013) studied the culture within NHS hospitals and concluded that environmental conditions, priorities, values, goals, norms and shared assumptions at the organisational management level determine HCWs' behaviour and performance with regard to care delivery. Similarly, Castro-Sánchez and Holmes (2015) suggest that the interplay between HCWs and organizational factors plays a crucial role in IPC performance. Despite having the same goal, Debono et al (2014) warn of a potential tension that could arise between the priorities of staff at local level and those of the organisation if this interplay is not acknowledged. According to these authors, staff tend to put their own interests above those of the organisation. It could therefore be argued that those at the frontline may end up following unwritten behavioural rules, and breaching legitimate policies, if the contextual pressures that they face in the real world are ignored by those in authority (Castro-Sánchez and Holmes 2015). This seems to suggest that

management teams need to pay more attention to the environmental and organisational contexts in which care is delivered in order to support staff compliance at the frontline.

NHS hospital managers' preoccupation with government-imposed performance targets such as the four-hour waiting time in Accident and Emergency departments has been blamed for exacerbating the transmission of HCAI in acute clinical settings (Conrad et al 2010; Francis 2013). Organisational managerial staff's preoccupation with achieving such targets has resulted in high rates of bed occupancy and rapid patient throughput, which are believed to be inconsistent with good IPC practices (Francis 2013).

The National Audit Office's (2009) study investigating IPC activity in English hospitals revealed that 44% of IPCTs cited high rates of bed occupancy as a significant barrier to their efforts aimed at reducing HCAI. Conrad et al (2010) tested the impact of short hand hygiene training sessions and bed occupancy rates using a multivariate time-series analysis and found that bed occupancy rates within general ward and intensive care unit settings correlated positively with the incidence of hospital-acquired MRSA. The role of the institutional culture in influencing staff compliance with rules is also highlighted in the literature and is explored in the next section.

2.4.5.2 Institutional culture

The effect of institutional culture is one of the main themes that emerged from

a systematic review conducted by Edwards et al (2012) encompassing fourteen exploratory studies investigating HCWs' perceptions of the facilitators for, and barriers to, changing IPC behaviours. Additionally, grey literature produced in the last few years appears to demonstrate that an organisation that does not view IPC as important is likely to foster a complacent culture that tolerates poor practice. For example, the highly-publicised serious failings in care quality and safety in NHS hospitals at both bedside and board level management in recent years have resulted in adverse outcomes for patients (Healthcare Commission 2006; Healthcare Commission 2007; NAO 2009; Francis 2013).

A report investigating a major C difficile outbreak involving 334 cases and 38 deaths at Stoke Mandeville hospital (Healthcare Commission 2006) criticised senior managers for serious failings which involved incorrectly interpreting national priorities and neglecting to prioritise IPC. The investigation by the Healthcare Commission (2007) of approximately 90 people who were believed to have died after becoming infected with C difficile at Maidstone and Tunbridge Wells (MTW) NHS Trust unmasked a number of similarities with the findings uncovered by its earlier investigation at Stoke Mandeville Hospital. According to the Healthcare Commission's (2007) report, managers at MTW NHS Trust focussed on meeting government targets for bed occupancy, which resulted in high bed occupancy rates that reduced the time available for cleaning, thus facilitating a higher probability of infection transmission between patients.

Similarly, the care scandal inquiry into Mid-Staffordshire NHS Foundation Trust investigated by Francis (2013) revealed a deficient hospital culture in which HCWs failed to provide care of a sufficiently high standard that patients could reasonably expect to receive. It also found that managers placed a disproportionately high priority on achieving targets which led them to tolerate poor standards of care and exposed patients to risks of harm. In addition, the Francis report acknowledged that patients and their families complained about the consistently poor and unsafe quality of care but their concerns went unheeded. This tolerance of poor practice is reflected in a theory explained by Banja (2010) whereby recognised standards or rules are violated repeatedly over a long period without causing a catastrophe and eventually become normalised within a healthcare system. He warns that over time, if these unsafe practices continue unchecked and become accepted in healthcare environments, the cumulative effect can lead to disastrous consequences. This is exactly what happened in the aforementioned hospital care scandals. To compound the problem, a lack of positive role models within an organisation is also identified in the IPC literature as being problematic, as explained in the following section.

2.4.5.3 Role models

Inappropriate practices demonstrated by senior or highly esteemed people in an organisation have been identified in previous studies as a barrier to other HCWs' compliance with good practices (Erasmus et al 2009; Ward 2010; Ward 2012; Gould and Drey 2013). When Erasmus et al (2009) explored

possible factors that led to poor hand hygiene among HCWs in a Swedish hospital, their participants cited the presence of negatively modelled hand hygiene behaviours by experienced nurses and doctors as reasons for their own noncompliance. Ward (2010) studied the IPC experiences of nursing and midwifery students on clinical placements and reported that students benchmarked the practices they observed experienced staff carrying out against what they had been taught at university.

In another study examining the attitudes of nursing students and nurse mentors towards IPC, Ward (2012: 304) documented the following opinion being expressed in a conversation between a consultant and a ward sister, which a student overheard: “I can either practice infection control or I can treat the patients, you choose”. Similarly, Gould and Drey (2013) conducted a national online study combining fixed and open-ended questions and reported that medical staff were the occupational group most commonly criticised for poor compliance by students. They also discovered that qualified nurses did not necessarily act as good role models to students on placement.

Equally, the literature also highlights the role that senior staff can play in influencing IPC practice in a positive way (Jenner et al 2006; Stevens et al 2013; McInnes et al 2014). In an earlier study, Jenner et al (2006) contended that consultants were best placed to act as role models and therefore suggested engaging them when attempting to improve compliance with IPC practice. Moreover, in a qualitative study undertaken by Stevens et al (2013), which examined leadership and hand hygiene among medical staff in an

Australian tertiary hospital, consultants, rather than infection control nurses, were regarded as having the greatest influence over medical hand hygiene practices. According to the researchers, consultants were seen by most medical staff as the clinical leaders in functional clinical units. It was also reported that the ward in which the consultant was perceived as having the most influence over hand hygiene achieved the best performance in compliance audits.

McInnes et al (2014) suggest that senior clinical and nonclinical leaders should be seen to champion best IPC practices and make it clear to their staff that noncompliance is culturally and professionally unacceptable within the organisation. Their participants felt strongly that mandating senior managers to model hand hygiene positively would improve staff compliance at unit/ward level. This suggests that role modelling by leaders may be an important factor in creating the type of culture that can either support or impede staff compliance with IPC recommendations. Another cultural barrier that impedes sustained HCWs' compliance with IPC recommendations mentioned in the literature is understaffing.

2.4.5.4 Inappropriate Staffing

The decline in IPC standards and occurrences of HCAI outbreaks in the failing NHS hospitals mentioned earlier is also associated with inappropriate staffing levels (Healthcare Commission 2006; Healthcare Commission 2007; Francis 2013). A study conducted by Bae et al (2015) revealed that

inadequate staffing and a lack of resources were significantly associated with nosocomial infections. In an article discussing staffing issues and patient outcomes in Australian tertiary hospitals, Twigg et al (2011) cite concerns expressed by nurses that they were unable to provide adequate care to patients because understaffing had resulted in excessive workloads.

These sentiments are consistent with the findings of the investigations into failing UK NHS hospitals mentioned previously, which highlighted the fact that low levels of staffing often make it difficult for nurses to find sufficient time to rigorously follow good hand hygiene practices, empty commodes promptly, clean mattresses and other equipment thoroughly after each patient use, administer antibiotics to patients in a timely fashion, complete fluid balance charts, supervise confused patients wandering in and out of isolation areas and many other tasks (Healthcare Commission 2006; Healthcare Commission 2007; Francis 2013).

Dixon-Woods et al (2013) reported that heavy workloads and staff shortages left staff feeling unsupported and demotivated. In contrast, Kong et al (2012) studied IPC practices in a well-resourced ICU and reported that they were unable to identify any correlation between staffing levels and MRSA acquisition. Furthermore, according to the literature, poor IPC practice is more likely to occur in settings where the physical environment is disruptive, inappropriately organised and inefficient in regard to the availability and accessibility of the resources needed to support compliance by HCWs (Knoll et al 2010; Timen et al 2010; Backman et al 2012; Weigl et al 2012;

VanSteelandt et al 2015).

2.4.6 Physical environment

VanSteelandt et al (2015) state that the physical design of a hospital unit plays a role in imparting cultural practices to HCWs and patients. They argue that the way a ward is structured and the activities of its staff are interlinked. Lack of conveniently located spaces for materials and equipment for staff use can influence IPC practice in terms of how HCWs interact with each other and with patients in their everyday environment. In a study carried out by Morrison and Yardley (2009), examining the management of pandemic influenza, participants highlighted the handling and disposal of tissues contaminated with secretions from sneezes or coughs as a challenge, claiming that disposal facilities were not always conveniently located nearby.

The suboptimal compliance with the wearing of protective goggles reported in a study by Foster et al (2010) was found to be related to their unavailability. Similarly, the unavailability and lack of immediate direct access to essential IPC equipment was cited as an obstacle to hospital nurses' compliance with standard precautions in a study carried out by Efstathiou et al (2011). Perceptions that the reduction of HAIs was beyond HCWs' control, which was noted in five studies systematically reviewed by Edwards et al (2012), were linked to organisational failures including inadequate facilities and equipment. In a study conducted by Mazi et al (2013) which investigated hand hygiene

practice in three critical care units, the placement of alcohol hand rub at an inconvenient distance away from the patients was perceived as mitigating against adequate compliance.

Conversely, a survey of IPC attitudes and opinions conducted by Harris et al (2000) in two tertiary hospitals revealed that HCWs preferred interventions that made adherence to hand washing easier in comparison to other initiatives. In another relevant study, Gurses et al (2008) reported that quick access to central venous insertion carts enhanced staff compliance with guidelines for inserting central lines in an ICU. Since then, several researchers have documented the ready availability of resources and ease of access to them as factors that enhance staff compliance with IPC recommendations (Knoll et al 2010; Timen et al 2010; Ward 2011; Backman et al 2012; Edwards et al 2012; McGaw et al 2012; Mazi et al 2013; Jackson et al 2014). As pointed out by Backman et al (2012), the design of the work environment, i.e. the physical space and the accessibility of equipment, has a bearing on how staff organise their work in terms of the routines and workflow within a clinical unit, which can in turn have an impact on their performance.

2.4.7 Chapter summary

This literature review has demonstrated that consistent compliance with the recommended IPC practices by HCWs working in inpatient settings continues

to present a significant and persistent challenge across all healthcare specialties globally, including ring-fenced elective units, due to a mixture of cultural individual, environmental and organisational factors. The problem remains, despite increased media publicity, law enforcement and the publication of guidelines designed to curb HCAI. The most frequently cited reasons in the literature for this failure include the following: poor attitudes towards IPC on the part of HCWs; competing clinical activities and priorities; poor role models; insufficient staffing; lack of knowledge; organisational management demands and ethos; unavailability of and inconvenient access to essential equipment.

Most studies that have generated these findings have been predominantly conducted in non-ring-fenced, non-elective settings encompassing intensive care units (ICUs) and open medicine and general surgery units. Importantly, this highlights the paucity of IPC-related research directly exploring cultural issues in ring-fenced elective settings combining surgical and orthopaedic specialties, which have become commonplace in acute hospitals in recent years (Coyle et al 2012; Briggs 2015).

Additionally, as demonstrated in appendix 1, very few previous studies were returned by the database searches on the subject of ring-fencing elective surgical inpatients. Moreover, those studies found were conducted in the context of elective orthopaedics or general surgical settings independently. None of the retrieved papers addressed cultural IPC issues in either ring-

fenced elective surgical units, or specifically units containing both surgical and orthopaedic patients, which is the focus of the current study. This supports Backman et al's (2012) argument that deeper knowledge of, and insight into, what motivates individuals and organisations to follow sustainable good IPC practices is currently lacking in the research literature. Thus, the current study seeks to address this gap by investigating cultural issues affecting HCWs' compliance with recommended IPC practices in a ring-fenced acute hospital unit combining elective orthopaedics and clean general surgery specialties. The intention is to identify the issues and offer solutions to address them so that HCWs' compliance with IPC recommended policies and practices can be improved.

Analysing why people behave in the way they do involves examining artifacts, their values and underlying assumptions that govern their behaviour (Schein 2010; O'reilly 2012). In this case, understanding the IPC behaviours of a small hospital-based multiprofessional team in its physical work environment and the management system that supports it requires a method of study that allows the researcher to explore contexts and meanings. Therefore, this study employs a naturalistic qualitative research design to explore cultural issues affecting staff compliance with recommended IPC practices in a 'ring-fenced' acute hospital ESW from the perspectives of the participants in their everyday practice within their natural environmental setting. The next chapter provides details of the methodology used.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter presents a reflexive account of the aims, methodology and underlying philosophical assumptions that underpin this research. In addition, the methodological ethical dilemmas and practical difficulties that emerged during the course of conducting the research are delineated and explanations of how these issues were overcome are elucidated. Lessons learned in the process are also highlighted. The primary intention is to show the influences on the researcher by making the research process transparent in order to demonstrate the credibility and integrity of the study's findings. The analysis of the findings, which includes the coding procedures undertaken, is presented in detail in chapter 4. At this point, it seems useful to commence by defining the term 'reflexivity'.

3.2 Reflexivity

According to Underwood et al (2010), reflexivity in research can be defined as the acknowledgment and identification of one's place and presence in the research and the use of the identified insights to critically examine the entire research process. Similarly, Berger (2015) views reflexivity as a major strategy for quality control in the process of generating qualitative knowledge whereby the researcher is part of the researched. Therefore, by highlighting my personal interests and standpoints, reflexivity provides insight into how the

knowledge constructed from the interpretations of the participants' perspectives was generated in this study. Furthermore, the researcher's perspective in terms of philosophies, professional background and experiences must be clearly identified since personal values and predispositions have an impact on the research (Berger 2015; Bryman 2016).

3.3 Researcher perspective

My purpose as an IPCNS is to contribute to the prevention and control of the spread of infection throughout my hospital Trust so that patients, staff and members of the public who visit the hospital are protected from any harm that may arise from avoidable infections. I am charged with the responsibility to provide a service that is responsive to the needs of patients and staff in my Trust hospitals. In qualitative enquiry, researchers are challenged to consider and reflect on the theoretical underpinnings that drive their research (Corbin and Strauss 2015; Bryman 2016). Bowling (2014) stresses that the method of investigation chosen depends upon the researcher's ontological stance and epistemological assumptions which are traditionally grounded in two very different overarching approaches to research: positivism and interpretivism.

As a nurse who deals with human beings in my everyday practice, I am committed to the professional philosophical value of humanism and naturally gravitate towards research methodologies that take into account the complexities and diversity of clinical situations. I subscribe to the notion that the subject matter of the social sciences, namely people and their institutions,

is fundamentally different from that of the natural sciences and therefore requires a research approach “that reflects the distinctiveness of humans as against the natural order” (Bryman 2016:26). Whilst I appreciate positivistic principles as offering an alternative means of viewing the world, I do not consider that there is one single, objective truth or pre-existing law waiting to be discovered to explain human behaviour.

On the contrary, I assume that multiple truths exist and see social reality as shaped by people who construct meaning and create interpretations through their daily social interactions in their natural environment (Bryman 2016). Moreover, I work in a complex healthcare setting which involves complicated relationships encompassing multiple interactions with people, information, technology, culture and the physical environment in which care is delivered. Against this background, I believe that as a researcher, I cannot ignore the context in which IPC practices occur. I believe that a structured positivistic approach cannot adequately address chaotic problems entrenched in cultural, psychosocial and emotional factors that influence IPC practice. As Patton (2015) points out, a quantitative approach does not acknowledge the contextual environment in which the research takes place, or the people behind the statistics, which is necessary to deepen understanding. My goal is to gain insight into how various multiprofessional HCWs construct cultural meaning that leads them to comply or not comply with the recommendations for preventing HCAI in a ring-fenced ESW by accessing their shared views, perceptions, interactions and experiences in their everyday work

environment. Thus, my research is ontologically constructionist and is located within the interpretivist epistemology.

Whilst positivism assumes that subjectivity and values are sources of bias that must be illuminated and controlled, I view subjectivity as an important means of understanding and constructing knowledge, given that qualitative researchers interact very closely with research participants (Bryman 2016). Subjectivity guides everything from the choice of topic studied to generating hypotheses, selecting methodologies, and interpreting data (Berger 2015; Patton 2015). Thus, I question the idea that, as an interpretivist researcher, I can genuinely succeed in keeping my research completely free of my own biases. Instead, I acknowledge that the personal and professional characteristics that I bring to my study have an impact on the conduct and reporting of the research.

As an IPCNS, my role encompasses challenging poor compliance with IPC policies, guidelines and protocols among HCWs at all levels within the organisation where I work. Moreover, I have undoubtedly developed strong opinions, beliefs and views about IPC practice as a consequence of my education, experience and observations in the field. Before embarking on this research, I was conscious that this stance would present a challenge to my neutrality towards participants' views. Consequently, as already indicated in the introduction to this chapter, I use reflexivity to explicate my values, presuppositions, experiences, choices, decisions and actions undertaken during the research process to allow readers to follow what I did. I discuss the

measures that I took to guard against the risk of my potential biases contaminating participants' evidence in order to preserve an authentic representation of their views (Berger 2015). Additionally, I trust that this allows readers to make their own judgements with regards to the credibility of my findings.

After all, an inherent barrier to the credibility of qualitative work is the suspicion that the researcher has shaped the results according to predisposition biases (Patton 2015). Therefore, throughout the research, I adhered to the principles of reflexive bracketing (Berger 2015), a concept which encourages the researcher to consciously set aside assumptions, beliefs, experiences and presuppositions and bracket them separately, to facilitate a more accurate description of the phenomenon addressed in the participants' interviews. I achieved this by maintaining a reflexive journal before, during and after the data collection and analysis processes. This journal contained the bracketed material that facilitated me to assess its impact on my data collection and analysis.

3.4 Aim of the study

The aim of this study was to examine cultural issues that affect IPC practices in an acute hospital ring-fenced ESW. This was done with the purpose of identifying key issues and offering recommendations to resolve them in order to improve HCWs' compliance with IPC policies and procedures in this area and similar settings. The term 'ring-fenced' in this study means that the ward

contains protected beds which, at least in theory, are dedicated solely for patients undergoing elective orthopaedic procedures, primarily joint implants and clean surgical operations to prevent HCAI acquisition. This led me to frame the research question as follows: ‘What are the cultural issues affecting HCWs’ compliance with recommended IPC practices in a ring-fenced acute hospital elective surgical ward combining elective orthopaedics and clean general surgery specialties? In order to gain insight into the issues from a cultural perspective, it was necessary to adopt a qualitative research approach.

3.5 Research design

My aspiration for this study was to achieve trustworthiness, credibility, and transferability of the findings, thereby ensuring that they could be applied to similar healthcare settings. Consequently, I had no need to quantify the phenomenon under investigation. Qualitative research is a particularly fitting method with which to study a variety of professionals in a functional healthcare unit because it does not assume that there is one universal truth to be discovered (Bryman 2016). Instead, it focuses on paying attention to acquiring an in-depth understanding of the subjective meanings attached to experience, interactions, behaviours and stories that shape the reality of the people being studied (Patton 2015; Bryman 2016).

Qualitative research is grounded in a range of theoretical frameworks and adopts a variety of approaches to guide data collection and analysis (Creswell

2013). The most common methodological designs used in social and health sciences within a qualitative paradigm include grounded theory, phenomenology and ethnography (Creswell 2013). Grounded theory is concerned with generating a theory inductively from data obtained from the views of the participants (Corbin and Strauss 2015). Phenomenology, a philosophical tradition developed by Husserl and Heidegger (Polit and Beck 2017: page 470) focuses on people's subjective meanings of their everyday life experiences and interpretations. Ethnography is primarily concerned with the study of culture (Leslie et al 2014). According to Polit and Beck (2014) the words, actions and products of a group create a culture, which in turn guides the members' view of the world and the way they structure their experiences.

Despite their differences, the qualitative designs described above all aim to understand the subjective reality of individuals or groups as it naturally occurs in their daily environment (Bryman 2016). Therefore, a qualitative research design guided by ethnographic principles (Leslie et al 2014) was considered best suited to exploring cultural issues that affect HCWs' behaviour in relation to the adoption of recommended IPC best practice. As a type of methodology used in healthcare research, an ethnographic approach considers what can be learned from local people and focuses on studying the effects of culture on healthcare institutions or professional groups as they undertake their work within their cultural setting (Leslie et al 2014). Therefore, to gain in-depth understanding of cultural issues affecting staff compliance with the recommended IPC precautions in the ESW ward under study, I needed to learn about the participants' values, beliefs, perceptions and practices in their

cultural-environmental context without attempting to manipulate them or their setting. In other words, my goal was to understand how various ESW multiprofessional staff construct cultural meaning that leads them to comply or not comply with the recommendations for preventing HCAI by understanding their feelings and interpretations, and to "see events through their eyes" (Neuman 2014: 104).

As mentioned by Holloway and Wheeler (2010), the context of participants' lives and/or work, affects their behaviour. Although grounded theory coding (Charmaz 2014) was used to analyse the data, as described in chapter 4, grounded theory research design per se and its related phenomenology were not chosen to serve as theoretical frameworks for this study because the primary intention was neither to emphasise individual experience nor to discover a theory. The following section describes how the data was collected, the recruitment procedures used, and how focus group and individual interviews were conducted.

3.6 Data collection

After gaining permission to access the research setting (see page 72 for a detailed description of the ethical approval process), data collection commenced by undertaking face to face interviews with organisational leaders accountable for the ESW.

3.6.1The research setting

The research originally commenced on a 27 bed Joint Replacement Unit (JRU) which provided specialist care for patients undergoing elective joint replacement orthopaedic surgery with a strict admission ring-fencing operational policy. Selection of the JRU as a suitable research setting was guided by the infection prevention and control team, based on the perception that it was a manageable, contained multiprofessional unit conducive to an environment in which to pursue a rigorous extensive investigation at a deeper level commensurate with doctoral studies. In reality, this proved not to be the case. Instead, an unanticipated event occurred during the course of collecting face to face interview data with organisational leaders. The JRU was suddenly reconfigured to an elective surgical ward (ESW) as a result of organisational reconfiguration to improve efficiency and maximise bed capacity. Effectively, the JRU ceased to exist and the newly formed elective surgical ward, combining elective orthopaedics and general surgical beds, was physically re-located to a bigger area and renamed.

The management operational structures and processes from board to ward level remained the same and fortunately the individual interviews with organisational leaders were not affected. The JRU nurses were redeployed to the new elective surgical ward and new staff with general surgical experience were added in response to the needs of the new service arrangements. The changes were considered substantial and needed to be approved by the local Research Ethics Committee and the hospital Research and Development

Group for the research to go ahead. As a result, data gathering involving frontline ward-based staff took place ten months after the completion of the configuration and implementation of the changes. Sample choice was driven by the nature and purpose of the study and my closeness to the research setting (Krueger and Casey 2015).

3.6.2 Sample

Although much of the available guidance focuses on specific actions to be adopted by all HCWs to combat HCAIs, it is now recognised that IPC practices exist within complex clinical settings in large complex organisations (Leslie et al 2014). Moreover, sustainable reductions in HCAIs require a zero tolerance culture to avoidable infections by both managerial and frontline staff across all disciplines at ward and organisational levels (DH 2015; CQC 2015). Thus, for this study, organisational leaders and various frontline professionals were purposefully selected in order to attain a comprehensive understanding of the phenomenon under investigation from ‘board to ward’. Purposive sampling requires the researcher to select participants based on their knowledge and expertise of the subject under investigation (Patton 2015; Krueger and Casey 2015). Therefore, a sample of thirty-one multiprofessional participants was chosen. The sample involved four focus groups, of which one was a pilot, and fourteen individual interviews. The composition of the participants with reference to occupational roles and gender is illustrated in Figure 3.1.

3.6.2.1 Organisational leaders

Ten leaders drawn from the ESW's accountability framework management structure for the prevention and control of infection were invited to participate. One declined due to work commitments and the other did not respond despite reminder invitation letters. To avoid losing potentially valuable data, these two leaders were substituted by their deputies who agreed to be interviewed. The interviews took place in the participants' offices or mutually agreed convenient venues. They appeared comfortable and relaxed and thus felt able to express themselves freely in their environments. The interviews were audio-recorded and lasted between 30 and 45 minutes.

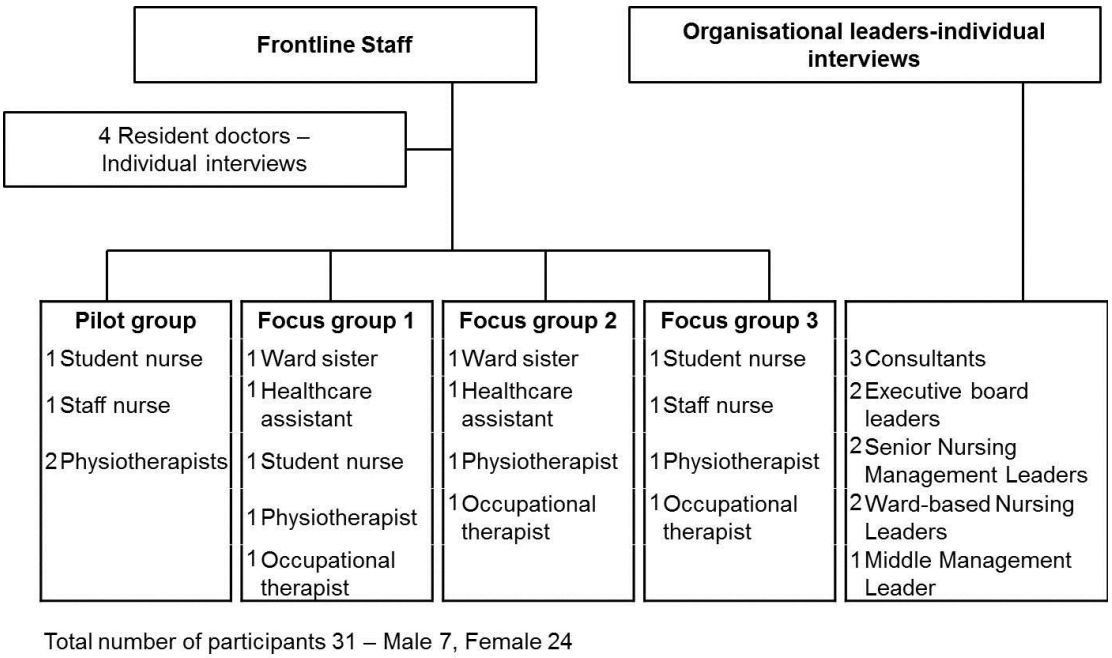

Figure 3.1 Research Participants

The decision to conduct face to face interviews, rather than a focus group with organisational senior staff, was based on convenience and pragmatism.

It was anticipated that attempting to gather a number of powerful authoritative figures comprising hospital management executives and consultants into a single group in one location for doctoral student research purposes could prove very difficult and therefore unfeasible in practical terms. Although this presumption could be interpreted as a source of bias, it was judged that the likelihood of a subordinate successfully recruiting enough of these high-level managers to participate in this research was minimal. Therefore, it was decided that the interviews could only be conducted on an individual basis. It is acknowledged that this could impact on the quality of data, since participation in a focus group could have yielded different results as a consequence of these managerial staff exchanging ideas and interacting with each other. The managerial staff were not the only members of the ESW multiprofessional team that presented recruitment challenges: this was also the case with frontline doctors.

3.6.2.2 Resident doctors

Whilst the initial plan was to include doctors in the focus groups, it became apparent during the recruitment process that, from a practical point of view, their work schedules would not permit attendance at group sessions, although they did express a willingness to be involved in the research. Interestingly, an analogous scenario was experienced by Dyas et al (2009) who reported difficulties and delays associated with recruitment in their focus group study which led them to revise their recruitment strategy despite careful consideration of suitable approaches at the design stage. Their modifications,

which required further ethical approval, included interviewing patients individually who had failed to attend focus groups due to personal reasons.

Similarly, in this study, further approval was sought from the local REC and relevant review bodies to interview the doctors individually using the focus group interview guide since they could not commit to attending a focus group. The focus group interview guide was used to collect data from four resident doctors because this did not involve a change to research informants, but only to the manner in which data was collected. The interviews were audio-recorded and lasted between 20 and 30 minutes. Three of the interviews were carried out in a meeting room away from the ward. One doctor was interviewed in the ward due to patient care responsibilities. Conducting this interview was quite challenging because of unpredictable patient care-related factors that needed to be addressed by the participant at the same time. This caused some disruption. As pointed out in the literature (Silverman 2013; Parahoo 2014), if the interview environment is not free of distractions, the flow of the discussion can be interrupted and it may also interfere with the interviewee's thought process. It is recognised that the quality of this participant's responses could have been adversely affected as a result. However, under the presenting circumstances, it seemed both unethical and unfeasible to take this doctor away from his/her clinical duties in the ward and move him/her to a more suitable venue outside the clinical environment for research purposes. Nonetheless, despite this compromise, hand hygiene-related cultural data yielded from this participant's interview proved highly relevant to answering the research question.

3.6.2.3 Focus groups

Focus group interviews have become increasingly popular across a variety of disciplines including health related research as a means to better understand how people think or feel about an issue or service (Krueger and Casey 2015). Redmond and Curtis (2009) argue that, through skilled facilitation, the focus group interview allows the participants to probe one another's reasons for holding a particular view, examine their feelings in depth and perhaps change their minds and eventually agree with views they would not have considered without the opportunity to interact with, and listen to, the views of others. Hence the focus group interview was selected as a means of collecting data because it suited this study's design and purpose of seeking to gain in-depth insight into cultural factors affecting IPC in everyday life from several perspectives and emotional processes emerging from the interaction between a variety of clinical staff in their cultural context and natural environment (Krueger and Casey 2015). As well as generating rich data drawn from the synergy between group members over a short period of time, focus groups are suitable for studying professional and organisational issues within institutions (Krueger and Casey 2015). The need for careful selection in terms of the focus group composition is highlighted in the literature.

3.6.2.3.1 Focus group participants

On the one hand, Grudens-Schuck et al (2004) recommend aiming for homogeneity within each focus group, on the grounds that a group with highly

diverse characteristics will reduce the quality of data because some individuals will feel inhibited and unable to express their ideas freely in the presence of people who differ from them in terms of power, status, job, education, etc. It is generally believed that people are more likely to share when they perceive that they are alike in some ways (Krueger and Casey 2015). On the other hand, because heterogeneity brings together a diverse group or a range of professions, it has the benefit of maximising exploration of different perspectives within a collective setting (Holloway and Wheeler 2010).

For this study, a purposive heterogeneous sampling method was chosen on the assumption that a variety of professionals working together, providing direct contact patient care in an acute hospital ESW, would all have something to say about their experience, perceptions, knowledge and behaviour regarding compliance with HCAI guidelines in their natural setting (Bryman 2016). Paradoxically, the group could also be considered as homogeneous in the sense that all the participants shared the common feature of being HCWs who worked in the ESW. However, it is worth keeping in mind Krueger and Casey's (2015) assertion that, to an extent, the nature or type of the focus group is determined by the purpose of the study.

3.6.2.3.2 Composition and selection criteria

According to various scholars, the number of focus groups required to reach theoretical saturation when addressing a research question is likely to be

three or four. The general consensus is that each group should ideally consist of five to eight people, making it large enough to gain a variety of perspectives and small enough not to be unruly (Barbour 2014; Krueger and Casey 2015). However, there appears to be no set rule for determining the optimum numbers or sizes of focus groups in the literature. As pointed out by Krueger and Casey (2015), in reality, the characteristics of the phenomenon under study, resource constraints and local practical issues all play a part in determining the composition of the focus groups, which could range from as few as four to as many as twelve people.

For the purpose of this inquiry, four focus groups, which included one pilot study, were conducted to capture a comprehensive multiprofessional representative view of positive and negative perceptions relating to IPC compliance issues in the ESW from a cultural perspective. Each focus group of four people contained multiprofessional staff working in close contact with patients, with a range of clinical grades being represented within each group. Segmentation by gender, ethnicity and age was considered insignificant for the group composition since the goal was to select potential participants based on their experience and knowledge of the phenomenon being studied and their ability to articulate their perspectives, thus providing insight into the research question (Krueger and Casey 2015). Therefore, nurses and allied health professionals who work in close contact with patients on a daily basis delivering extensive ‘hands on’ care in this ward were invited to participate in the research.

In essence, the adoption of IPC precautions to minimise the spread of infection is an essential element of their responsibility for ensuring a safety culture within the clinical environment. All participants had worked in the ward for a minimum period of six months, with the exception of two student nurses who were in their third week of placement. Consideration was given to the inclusion of student nurses to reflect real-time membership of the culture under study when the research took place. Conversely, HCWs with no extensive 'hands on' direct contact with patients were excluded from the focus groups.

3.6.2.3.3 Recruitment process

Whilst Reeves (2010) sees negotiating with gatekeepers as crucial for a researcher to access the research setting and participants, Wanat (2008) argues that official gatekeepers' approval does not guarantee cooperation with the participants or other stake-holders. This was true of my experience. I made initial contact with the general manager and clinical director to gain permission for conducting the research. These were the official gatekeepers with authority to grant access to surgical directorate speciality research sites. My initial plan for recruiting focus group participants was to obtain a list containing names of all the multiprofessional staff working in the ESW from the Personnel department. From this list, I envisaged purposefully screening potential participants using selective criteria, focusing on professionals with the most relevant characteristics, experience and knowledge to answer the research question (Krueger and Casey 2015; Patton 2015).

Although I had been granted permission to access staff by gatekeepers at the highest organisational level, Personnel staff declined to release this information, citing their legal duty to comply with information governance, a framework which demands that organisations must manage patients' and employees' personal information securely, efficiently and effectively. Initially, I imagined that once I had gained approval from the local REC and gatekeepers, I would then have access to any relevant information from a research perspective. On reflection, I realised that I had not considered the need to obtain consent from all staff to access their employee details. As soon as I became aware of this oversight, I fully appreciated the position that the Personnel staff had taken. Therefore, I had to consider a different recruitment strategy for selecting focus group participants. In qualitative research, recruitment strategies are flexible and thus can be modified if initial strategies do not generate the desired number of recruits (Krueger and Casey 2015).

When considering recruitment strategies, Mack et al (2005) advise consulting with local people who have connections to the study population as they may be able to offer ideas regarding facilitators and obstacles to recruitment. In the case of this research, the practicalities of organising focus group discussions proved challenging since the people I was trying to access were very busy professionals. Although the allied health professionals were ward-based, they were under the management of the integrated therapies department. Therefore, I sought help from the ward and integrated therapies

managers with the recruitment of participants, both of whom were approachable and happy to help.

The integrated therapies manager provided the names of physiotherapists and occupational therapists designated to the ESW. The ward manager used the duty rota list to identify different grades of nursing staff consisting of ward sisters, staff nurses, healthcare assistants and student nurses. Thereafter, I contacted potential participants by email, inviting them to take part in the research. The email gave a brief overview of the study. Krueger and Casey (2015) suggest follow-up communication after initial contact with the participants to sustain interest. I therefore followed up the invitation email by visiting the potential participants at their place of work in person. My proximity to the research setting facilitated face to face communication. I discussed the research with each prospective participant to establish their willingness to take part freely. I explained the purpose, potential risks and anticipated benefits to the patients, staff, the organisation and myself. In addition, I gave each staff member an invitation letter (Appendix 2) and a focus group participant information sheet (Appendix 3a), allowing two weeks for them to respond. This provided an opportunity for potential recruits to read the documents in advance and digest the information fully before deciding to participate. I then made arrangements to schedule the formal interviews with the help of the managers. The interview dates were agreed with the participants and reminder emails were sent one day before the sessions began in order to maximise attendance. The initial total number of people who were invited to participate from the lists provided by the managers was 25.

However, only 17 participants attended the final focus groups. This number includes the pilot group. Those who failed to attend, despite agreeing to participate in the first instance, were not pursued.

3.6.2.3.4 Logistical difficulties

I found the logistics of assembling different professionals located in different places into one physical focus group venue very challenging and often frustrating. As Mack et al (2005) point out, what happens on the day may be determined by many different factors, not all of which can be controlled. In my case, on two occasions, I made arrangements to carry out the focus group sessions but was thwarted by unforeseen circumstances. On the first occasion, the participants failed to turn up for work due to atrocious wintry weather conditions; on the second occasion, some participants cancelled their attendance at the last minute citing work commitments. The focus groups also took place during a very challenging financial climate organisationally as a result of the burden imposed by the UK government on NHS trusts to reduce costs. Consequently NHS HCWs are under pressure to meet increased healthcare demands with fewer resources. The impact of these efficiency savings and cuts on staffing levels across various disciplines made it difficult to gather sufficient potential participants to attend focus groups.

I was acutely aware of the pressures that the participants were under due to increased workloads, a staff freeze and organisational financial constraints. As a result of this, I felt guilty about taking members of staff away from clinical

activities during their working hours in order to interview them for an academic research project. Furthermore, reflecting on my professional values as a nurse, inviting bedside staff to leave patient care responsibilities during a shift for research purpose, in order to fulfil doctoral study requirements, seemed unethical. I therefore sought to conduct the focus groups during off-duty or meal-break times.

Similarly, Happell (2007) advises carrying out focus group sessions at a time and place that will cause minimal disruption for the participants, for example, at shift hand-over times in inpatient units. Hence, for this study, focus group interviews were carried out within lunch breaks between 13:45 and 14:45 hours. This was recommended as the most convenient time to run the focus groups by the managers and the prospective participants because it coincided with the overlap of staff on a morning to afternoon shift hand-over time. Consequently, the increased staffing levels during this period maximised the opportunity for potential participants to attend interview sessions during their break time without disrupting clinical activity. Each session lasted between 50 and 60 minutes. Participants had been alerted to the time commitment required during the recruitment period. As Krueger and Casey (2015) point out, researchers should consider the extent to which focus groups can be accommodated with the activities of the potential participants to ensure optimal levels of participation in a relaxed environment.

Guidance on the use of focus groups highlights the establishment of an environment that is conducive to group discussion and convenient for participants as key considerations to promote participation (Krueger and Casey 2015). The physical location should be comfortable, private, non-threatening to participants and sufficiently removed from possible interruptions (Krueger and Casey 2015). Paying attention to the décor of the venue, the seating arrangements and availability of refreshments facilitates an informal atmosphere which results in participants feeling comfortable enough to express their thoughts freely (Krueger and Casey 2015).

Contrary to this guidance, the venue used for the first focus group interview was inappropriately located. This meeting room appealed to me because it was relatively easy to secure since it was situated in the department where I worked. Importantly, I had not taken into account that the location was not easily accessible to the participants because it was situated in a different wing of the hospital with security-coded doors. This presented an access problem because not all the participants had identity swipe cards which would allow them to enter the venue. In addition, none of the participants were familiar with how to get to the venue. Therefore, I had to arrange to meet all the participants in the research ward and then walk with them to the venue. Waiting for all the participants to congregate as well as walking from the research ward to the venue resulted in precious time being lost. Consequently, there was a delay in the time originally scheduled for the focus group session to commence. This was a learning point. I realized that choosing a venue convenient to the participants was essential to avoid

logistical problems. Hence, to ensure a relaxed and welcoming atmosphere for the participants, three subsequent focus groups were held in a quiet room within the ward vicinity away from interruptions and distractions. This well-ventilated venue, which was decorated and furnished to a high standard, was primarily used for staff training and multidisciplinary team meetings; thus, it was easily accessible and familiar to all the participants (Krueger and Casey 2015).

Whilst trying to encourage everybody to talk during the pilot group discussion, I could not remember the names of the student nurse and the physiotherapist. I suffered a moment of embarrassment as a result of not paying prior attention to the set-up of the room and seating arrangements. On reflection, I later realised that I should have considered using a seating plan and nametags to enable me to address all the participants by their names. Therefore, prior to subsequent focus group sessions, with the benefit of hindsight, I arrived at the venue early to prepare the room. I placed a table in the middle of the room with chairs around it to allow the participants to sit in a circle so that they could see, talk to, and hear, one another easily and freely (Krueger and Casey 2015). The use of nametags facilitated accurate identification of each participant and enabled me to build up good rapport with them. As the sessions were held at lunch time, I provided refreshments as a gesture of appreciation to the participants for their commitment to participating in the study (Krueger and Casey 2015). The refreshments were appreciated by the participants and helped create an informal relaxed

atmosphere in which they appeared comfortable to share their thoughts unhurriedly without needing to rush to the canteen to buy food.

3.6.3 Interview schedules

Semi-structured interview schedules with open ended questions were used to collect data. The design of the interview schedules was guided by the work of Erasmus et al (2009: 46) who investigated hand hygiene behaviour among HCWs in a Dutch hospital setting, addressing the following questions in their interviews:

What are the reasons for noncompliance?

Does anything prevent HCWs from performing hand hygiene?

How could hand hygiene be stimulated?

The above questions were modified to suit the objectives of the current study and the nature of the participants from ‘board to ward’. Therefore two tools were formulated; one for ward-based front line staff and the other for organisational leaders (Appendices 4 and 5). Although questions were drafted in a way that was aimed at providing direction to the participants without restricting their responses, themes like workload, staffing, high bed occupancy etc., identified in the literature review as barriers to HCWs’ compliance in clinical settings were used as prompts to aid discussions during the interviews. Creswell (2013) encourages testing the research instrument to detect inadequacies and enable them to be remedied as necessary. As a

novice researcher, I conducted pilot studies involving two individual interviewees, using work colleagues to identify inadequacies in the interview schedules and one focus group to test my group facilitation skills. Listening to recordings and reviewing handwritten notes in a timely fashion enabled modification of the interview guide between each focus group. For example, lack of clarity on cleaning protocols, a topic that was not in the interview guide, was raised by the first focus group as an important issue related to IPC practice. In effect, themes emerging from earlier interviews helped to guide subsequent focus group discussions.

3.6.4 Facilitation

According to Parahoo (2014), facilitation requires a skilled, prepared and experienced interviewer to handle the focus groups and avoid loss of control. Although I had not previously facilitated a multiprofessional focus group for research purposes, my probing skills had been enhanced by conducting individual interviews with organisational leaders earlier in the study. In addition, previous experience of facilitating learning with groups in my IPCNS role had equipped me with the necessary transferrable qualities and skills to manage a group discussion without being intimidated or losing control. To break the ice, I introduced myself at the beginning of each session and briefly described the research purpose, consent procedure, audio-recording procedure, issues of anonymity and confidentiality, etc.

It was also imperative to establish ground rules. As suggested by Barbour (2014), I advised the interviewees to allow all members of the group to participate equally to ensure the smooth running of the session and pointed out that transcription of the discussion would be easier if one person spoke at a time. In addition, all participants were asked to sign a consent form (Appendix 6) before the discussion began. The consent procedure is described in detail in the next section under the heading ‘Ethics’.

However, my experience of facilitating the first focus group without an assistant caused me some anxiety. I found taking notes, monitoring the recording equipment, observing non-verbal communication and maintaining the flow of the discussion all at once quite arduous. This unsettling experience offered an important lesson. Having an assistant present in subsequent group sessions enabled me to concentrate on the discussion since I did not have to pay attention to the technical aspects associated with facilitating a focus group. My role as a moderator was to question, probe, and follow up responses, and encourage discussion without imposing my own assumptions on the interviews (Krueger and Casey 2015).

Although the questions followed a logical sequence in the interview guide, some themes were brought up by the participants before the questions were asked. In response, I exercised flexibility in terms of the order in which the questions were asked. It was important for the participants to feel that they were in control, free to talk about issues in the order that they prefer, and to feel comfortable to raise any other issues of interest about compliance with

the standard precautions for preventing HCAI (Krueger and Casey 2015). As highlighted in the literature, the purpose of the interview guide is not for the facilitator to dominate the discussion, but to maintain a balance between the researcher's focus and the group discussion (Krueger and Casey 2015). Discussions were enhanced by asking the participants to give examples with which to elaborate their viewpoints.

However, occasionally, I habitually nodded my head during dialogue with participants, not with the intention of showing approval of what was being said, but to be polite to the interviewees. I accept that nodding could be regarded as a potential source of bias but I share the view expressed in the literature by a number of scholars (Barbour 2014; Parahoo 2014; Krueger and Casey 2015), that good interpersonal relations are essential for conducting interviews successfully. As the exchange of views unfolded, participants engaged in lively conversations, probing and clarifying one another's assumptions as well as bouncing ideas off each other, thus generating rich data. Each focus group session was concluded by thanking the participants.

3.6.5 Ethics

3.6.5.1 Methodological consideration

Whilst participant observation as a data collection method is at the heart of field work in ethnographic research approaches (Hammersley and Atkinson 2007), it was not used for this study. First, I could not commit to the required

prolonged periods of time in the research setting due to personal commitments and being in full-time employment. Second, Hammersley and Atkinson (2007) argue that the role of observer as participant creates the Hawthorne effect whereby, through making the participants aware that they are under study, one runs the risk of changing the very action that is under observation. I was concerned that participants might have behaved in an artificial way if they had known that they were being observed.

Robson (2011) describes the complete participant role as being one in which the observer covertly engages in the activities which are to be observed. Covert observation appeared unethical as I felt that it intentionally deceives the participants and thus damages the trust which is essential in an organisational and research relationship. This may seem an ironic statement to make considering that in my role as an infection prevention and control practitioner, I frequently undertake covert observational exercises or audits to measure compliance with evidence-based interventions aimed at combating the spread of infection within hospitals. However, this research was conducted in an ethical manner in accordance with research governance guidelines (DH 2005).

Striking a balance between not violating the rights of staff participants and avoiding the Hawthorne effect presents a challenge to the researcher that is well-documented and acknowledged in the literature (Patton 2015; Bryman 2016). However, in this instance, I considered that research ethics require

research participants to be protected. Moreover, DH (2005:7) states that, “the dignity, rights, safety and wellbeing of participants must be the primary consideration in any research study”. Hence, healthcare investigators have an obligation to justify their research intentions to ethics committees, gatekeepers and participants to ensure that ethical standards are upheld (Beauchamp and Childress 2013).

3.6.5.2 Ethical approval

Ethical permission to undertake this research was sought from the local authority, NHS Foundation Trust and university Research Ethics Committees (REC) through the Integrated Research Application System (IRAS) and submission of the research protocol. The protocol outlining the aims, objectives, methodology, ethical issues and expected outcomes of the research was scrutinised by a REC panel and a favourable opinion was given, pending very minor clarifications relating to ethical issues (see approval documentation in appendix 7). A full unconditional ethical approval was granted once I had clarified the highlighted points in a letter to the REC. Throughout the research process, I constantly reminded myself to abide by the ethical principles of respect for autonomy, non-maleficence and beneficence (Beauchamp and Childress, 2013).

3.6.5.3 Respect for autonomy

Tolich (2009) advises that taking part in focus groups involves risks that must be identified explicitly to participants so that they can make informed decisions about whether they are willing to absorb those risks and take part in the research. He also emphasises that participants must be made aware in advance of any harm that they may face as a result of the research and urges researchers to make use of a participant information sheet containing sufficient details to engender the participants' valid consent. Similarly, according to Holloway and Wheeler (2010), respect and autonomy entails participants in the research being allowed to make free, independent and informed choices without coercion.

Thus, for this study, a participant information sheet (Appendix 3a for focus groups and Appendix 3b for individual interviewees) outlining the research intentions, benefits and risks was emailed to organisational/clinical leaders and distributed manually to all frontline participants in their workplace during the recruitment phase of the research. As previously mentioned, this encouraged the participants to read the information in advance to allow them enough time to fully assimilate the ethical implications of the research before they agreed to take part. In addition, I went through the information sheet with the participants prior to the interview sessions and allowed them an opportunity to ask questions relating to the given information. It was important to acknowledge the autonomy of the participants at this stage.

According to McGregor et al (2010), an inherent power imbalance exists between researcher and participants during the recruitment phase which, if ignored by the researcher, could develop into an exploitative relationship. In the context of status difference, they further suggest that lower status individuals may follow the advice of higher status individuals because of assumptions about their hierarchical role. This assertion resonated with me greatly as I had sought help with participants' recruitment from their immediate managers. All the therapists and nursing staff who were approached responded that they wished to participate. Many of the potential participants were already aware of the study because the managers had made announcements about the project.

Reeves (2010) contends that gatekeepers can either help or hinder research depending upon their personal thoughts on the validity of the research and its value. I realised that depending on the support of the managers to aid the selection and recruitment of participants could be a potential source of bias, but it would have been impossible to bring together the multiprofessional staff with their various shift patterns and workloads to contribute to the focus group discussions without their managers' help. Furthermore, as this study was an independent academic enquiry conducted to fulfil the requirements of my doctoral degree, I considered it vital for its success to gain the support of gatekeepers.

However, I was wary that multiprofessional bedside staff might feel obliged to participate because of the powerlessness associated with their status as subordinates who had been influenced by their superiors to take part in the research. Consequently, I addressed this concern by emphasising to all the participants that the decision to take part in the research was completely voluntary and that they had a right to refuse to participate or leave the study at any time without giving a reason (Krueger and Casey 2015). Prior to each session, I asked the participants to sign a consent form (Appendix 6) after explanations intended to acknowledge their agreement to take part and to ensure that they fully understood their right to refuse to participate or withdraw from the research at any time if they wished. I also pointed out that, unless they objected, any information given prior to leaving the study might be included in the research findings.

3.6.5.4 Non-maleficence

Due to the small samples used in qualitative research, there is a concern that confidentiality may not be maintained and that the subjects may be identifiable (Bryman 2016). This study therefore aimed to ensure non-maleficence and great care was taken to protect the participants from harm. I stressed to the participants that the data would be anonymised to the best of my ability. The results were reported in a way that guaranteed the anonymity of the participants (Bryman 2016) and no names appeared in any of the papers on which information was recorded. Pseudonyms and initials were used in transcripts and the reporting of results, thus ensuring that the

meaning of the issues raised by the participants was not lost. At the beginning of the research, I had listed the titles of all the organisational leaders who participated in the study. However, during the process of analysis, I realised that even if I had not mentioned names, verbatim passages of speech linked to their role titles could pose a threat to their anonymity, in cases where there was one individual in a sole leadership role. I was therefore careful to avoid the use of quotations that could result in an individual's views being identified due to their role title. Identifying spoken material using numbers for both focus group and individual interview data ensured that the material presented could not be attributable to an individual participant.

Confidentiality is an issue of particular concern in focus groups since statements are made to an entire group; thus, the researcher has less control over the inappropriate sharing of information outside the focus group (Krueger and Casey 2015). Although I advised all the participants to respect one another's views and not to talk about the discussions with anyone outside the group as a ground rule, I warned them that full anonymity could not be guaranteed when taking part in a focus group. The risk that other people in the group might not keep the content of the discussion confidential was highlighted in the information sheet. As Tolich (2009) points out, there is no ethical sanction on a participant should they disclose what was said by another focus group member to someone outside the group.

From the researcher perspective, confidentiality was maintained to comply with the Data Protection Act 1998 and Caldicott Principles (1997 revised

2013) by the careful storage of the audio-tapes and transcripts in securely locked cabinets. The data stored on computers was password protected. An encrypted device was also used for storage and transfer of data. The tapes were destroyed once the data analysis was completed, in line with the Good Clinical Practice (GCP) directive and research ethics guidelines. Consent to audio-record interviews and allow the assistant to record verbal and non-verbal communication during focus group discussions was obtained from the ESW senior managers and participants both in writing and verbally. The assistant was advised to maintain confidentiality at all times and signed a confidentiality affidavit (Appendix 8). In addition, I made all the participants aware verbally and in writing that I would anonymously share the information that they gave me with my research supervisors and peer reviewers.

Although there appeared to be no evident significant risk of causing physical harm, I made it clear to all participants verbally and in writing that, as a nurse researcher, I was obliged to inform the person to whom they were accountable of any information disclosed that could place patients, staff and others at risk of harm, in accordance with the research ethics guidelines. This information was included in the participant information sheet and consent form.

Prior to giving out this information, I was anxious about two things: first, that staff might be put off taking part in the research; and second, that if they agreed to participate, they might feel inhibited about expressing their views honestly for fear of reprisal. Fortunately, this was not the case. It seemed that

staff perceived my research as an opportunity to voice their concerns in relation to barriers that impeded good IPC practice in their everyday work and, as such, used it to offer solutions, thereby improving patient care and service provision. Sometimes, focus group participants may experience stress as a result of the discussion, particularly when dealing with sensitive subjects (Krueger and Casey 2015). This was not the case in my research as the topic under discussion appeared not to be of a sensitive or distressing nature to participants.

3.6.5.5 Beneficence

Generally, healthcare research is conducted for the benefit of users, professionals and the public (DH 2005). The goal of the study was to improve clinical practice to ensure safe, high quality patient care from an IPC perspective. Participating in the study gave staff the opportunity to express a multidisciplinary view and share experiences about IPC practice in their daily environment. It was anticipated that the findings would inform managers and their staff about more successful ways to overcome barriers that impede the adoption of standard precautions and develop more effective interventions and environments that promote best practice in preventing HCAI. I also intended my research approach to provide guidance for doing research involving a diverse group of professionals in similar contextual settings. As well as being used for my doctoral thesis, it is anticipated that the study's findings will be presented to the healthcare staff in my workplace and at

academic/professional conferences. Dissemination to a wider audience through journal publication will be considered.

3.6.5.6 Ethical dilemmas

As a nurse researcher, reconciling my nursing professional code of conduct with ethical research obligations whilst simultaneously attempting to satisfy my intellectual curiosity, presented me with considerable difficulties. In an article about research ethics, Alderson (2001: page 19), poses the question: “What should researchers do if they observe dangerous or negligent or unethical healthcare?” I found myself in a situation in which I had to ask a similar question regarding incidences when the participants said things that were not in line with protocols which would normally require my intervention as an IPCNS. For example, one participant expressed the view that the hospital-approved alcohol hand rub was too strong to the point that it irritated and cracked the skin on her hands. Therefore, she obtained and brought into work her own alcohol sanitiser which did not irritate her skin but was not hospital-approved. Contrary to this, the hospital hand hygiene policy clearly advises staff to contact the Occupational Health department for assessment if they experience skin irritation as a result of any hand decontamination products provided by the Trust. I asked myself whether or not I should intervene.

This situation reflects the view expressed in Latimer’s (2003) comments that the researcher may find him-/herself in possession of information about rule-

breaking behaviour which could harm some participants if it was revealed to the relevant authority figures, e.g. managers. Taking action to remedy the situation during the conduct of the focus group interview would compromise my neutrality as a researcher and perhaps raise an ethical dilemma in relation to my research. Furthermore, through my reading, I learned that in research, my moral responsibility to the participants should override my responsibility to challenge the aforementioned practices that breached IPC policies in the research setting. My major concern was to protect those who had agreed to participate in my study.

Ultimately, I exercised my professional risk assessment skills to decide whether to act in a manner that safeguarded patients from harm in line with my code of professional conduct or adhere to research ethics which demand that participants be protected. In this instance, I judged that what was said by the participants did not pose an immediate danger to patients and therefore I remained in, and prioritised, the role of the researcher. Once the interview had been completed and the audio tape turned off, I found no reason to be bound by the same restrictions. Therefore, I dealt with the issues raised after I had removed my ‘researcher cap’.

One of the therapies participants cited an incident in which they claimed they were unfairly challenged by a nurse for wearing gloves unnecessarily before attending to a patient who was known to have faecal incontinence. The participant asked the question: “Should you use gloves pre-emptively or not?” and continued, “We don’t have any policy on that!” Suddenly, my observer, a

work colleague whom I had instructed not to take part in the discussions prior to the conducting of focus groups, shouted: “It’s there!” This placed me in an awkward role-conflict position which required me to think on my feet (Schon 1991). “Perhaps I should ask my observer to document these questions and deal with them when this focus group discussion is over,” I suggested. All participants and the observer agreed and I was then able to move the discussion forward in my role as a moderator.

I found myself confronted with questions such as: “I‘ve seen consultants remove people’s wound dressings without gloves and without washing their hands, do they get infection control training?” Not being able to offer immediate answers to such questions was often frustrating, especially when I sympathised with some of the issues raised, yet drawing on my professional experience to respond to such questions could have jeopardised the integrity of my research. Under these circumstances, it was tempting to revert to my professional role. I recalled one of my supervisory sessions in which my supervisor and I discussed the use of reflexivity to address issues of dual role conflict and bias, bearing in mind that I was researching my own field of practice. Therefore, drawing on the principles of reflexivity, I managed to consciously stay focussed as a researcher and was then able to answer those questions when I had switched off the audio tape.

Another difficulty was that some participants had specific expectations which they hoped the study would address. I sensed that the participants seemed to welcome me in anticipation that I could help them in some way since I was

giving them an opportunity to voice their concerns and frustrations about some of the barriers that prevented them from complying with IPC standard principles, including the policy for ring-fencing elective patients. For example, one focus group participant said: “Hope the study will help us or our ward to properly ring-fence us. It’s not that we’re very selfish with our beds but it’s for the benefit of our patients as well, cos that’s the reason why we are screening the patients”. This made me feel as if I was being perceived as an IPC professional doing research and participants therefore wanted me to resolve their problems. I was worried that if the participants’ expectations for action were not met, it could lead to consequential risks of disappointment, regret, powerlessness or other feelings (Krueger and Casey 2015). Therefore, as well as highlighting the benefits, I reiterated to all participants that I was primarily undertaking the research as a requirement for my doctoral studies.

3.6.6 Trustworthiness and credibility

Maintaining credibility, trustworthiness and minimising researcher bias are important and challenging issues in qualitative research that are highlighted in the literature, given that the analytic process is inductive (Corbin and Strauss 2015; Patton 2015). While quantitative analyses are subject to statistical procedures to determine the statistical significance of the data, Creswell (2013) outlines some additional verification procedures that can be used to enhance the trustworthiness and credibility of the research findings in light of the fact that the qualitative analyst relies on people’s words to interpret meaning:

- clarifying researcher bias
- member checks
- triangulation
- peer review
- prolonged engagement in the field

3.6.6.1 Clarifying researcher bias

Since the researcher is the primary instrument of data collection and analysis, reflexivity is deemed essential when conducting real world research (Berger 2015; Silverman 2013). Several qualitative authors appeal to researchers to consider reflexivity as a means of controlling the effects of researcher bias and its influence on the research process (Galindo 2011; Berger 2015; Patton 2015). As pointed out at the beginning of this chapter, a reflexive account was incorporated into this research as a quality standard to foster the necessary openness and transparency to enable the reader to decide and conclude whether or not its findings are convincing.

3.6.6.2 Member checking

In relation to this study, a process of member checking (Creswell 2013) was applied by presenting the themes identified from the analyses of the transcripts to the participants to enable them to validate what they had said in the interviews. Although the majority of the participants responded and validated the themes identified from the transcripts as accurate

representations of what they had expressed in the interviews, it was difficult to trace those who had left the research setting and gone to work elsewhere in different organisations.

3.6.6.3 Triangulation

Whilst methodological triangulation is used to enhance the validity of findings in qualitative research (Creswell 2013), the rationale for selecting focus groups and individual interviews as data collection methods for this study was primarily to achieve a comprehensive understanding of the phenomenon under investigation from ‘board to ward’ rather than for confirmatory purposes. However, combining the individual and focus group interview methods enhanced the credibility of the findings.

3.6.6.4 Peer review

The research proposal had previously been peer-reviewed by an independent IPC academic recommended by the UK Infection Prevention Society senior representative. The comments offered were incorporated into the protocol. Further constructive peer feedback was gained through poster and paper presentations at student research and professional conferences during the period in which the study was conducted. My university research supervisor monitored the methodological quality of the study.

3.6.6.5 Prolonged engagement in the field

Prolonged engagement in the field as a verification technique was not done, because participant observation was not the intention of this study. Reasons for not undertaking participant observation are discussed separately under the heading ‘Methodological consideration’, a sub-section of ‘Ethics’ on page 69.

3.7 Chapter summary

This chapter has described in detail how the study was executed, explicating the theoretical underpinnings as well as problems that arose during the process and how these were resolved. The strategies adopted to enhance the credibility and integrity of the research were also outlined. The analysis of data, which includes an explanation of how the transcription was carried out, is presented in the next chapter.

CHAPTER 4: ANALYSIS

4.1 Introduction

This chapter describes how all the interviews conducted in this study were transcribed, coded and analysed, starting with the transcription process.

4.2 Transcription

Brinkmann and Kvale (2014) highlight the process of transcription as a critical component of analysis. Transcribing one's own interviews means that the researcher gets immersed in the data and becomes more familiar with the process of data interpretation and analysis (Gale et al 2013). In this study, all the data from the focus groups and organisational leaders' interviews were transcribed verbatim. The initial experience of transcribing material from a Dictaphone was problematic. Documenting ungrammatical phrases, deciphering unfinished words and distinguishing different voices when participants spoke at the same time was a struggle. To address this problem, a reflexive diary was used to bracket these potential sources of bias in an attempt to maintain the integrity of the data. Fortunately, from a conversation with work colleagues in a different department about the difficulties encountered while transcribing the data, it transpired that help with accessing high quality transcription equipment was available from the hospital's information technology department. The information technology department was then contacted for help and foot-pedal controlled audio player software,

designed for transcribing audio recordings was provided. Listening to all the interview tapes again on high quality, efficient transcription equipment enabled words that had been missed earlier using the Dictaphone to be clarified and deciphered. Once the transcription of the audio recorded material had been completed, the process of interrogating, synthesising and interpreting the data began.

4.3 Researcher experience

At the start of the analysis, confusion ensued regarding the most appropriate way to make sense of the data. Texts on qualitative data analysis (Charmaz 2014; Creswell 2014; Corbin & Strauss 2015; Patton 2015) indicate that there is no single correct way to interpret qualitative data. What exists is a plurality of analyses and interpretations which reflect the particular theoretical perspective or tradition within which the researcher is working (Patton 2015). Thus, according to the literature, the challenge for the qualitative researcher is to make the analytical process used and the conclusions reached from the data more explicit in order to ensure credibility and confidence in the methodology (Corbin & Strauss 2015; Patton 2015). Hence, that is what this study aspired to do. The following section discusses how the coding procedures were conducted, starting with de-cluttering the data.

4.4 Coding procedures

4.4.1 De-cluttering the data

Saldana (2013) encourages ‘cutting clutter’ in narrative reporting to ensure an accurate description of the participants’ responses in relation to the phenomenon under study. First, all the transcripts were read individually, several times, to get an impression of the raw data as a whole. During this activity, it was noted that some participants’ responses had digressed away from the topic under discussion. As Bazeley and Jackson (2013) point out, not all participants’ data are relevant to addressing the research question. Therefore, unnecessary text that was not useful in answering the research question was removed from the transcripts whilst they were still in Microsoft Word document format.

4.4.2 NVivo Pro 11 qualitative software package

Certain literature recommendations suggest the use of computer software packages in the analysis of qualitative research as a desirable way to facilitate efficiency and effectiveness in data management , especially for novice qualitative researchers (Bazeley and Jackson 2013; Friese 2016). According to Bazeley and Jackson (2013), the employment of a software package helps to ensure that the analyst works more methodically, thoroughly and attentively than if they worked manually, as well as providing tools that facilitate robust and complete data interpretation. In contrast, other scholars argue that this is a highly mechanistic undertaking that can stifle creativity as well as hampering the researcher’s ability to interact with the data in an authentic manner (Charmaz 2014).

However, as a novice qualitative analyst, a computer program was enlisted to assist the analysis of this study, as advised by Bazeley and Jackson (2013). NVivo Pro 11, a software package produced by QSR International, was chosen for this study because it was recommended in a university session as offering effective user-friendly software capable of helping the analyst to uncover connections in qualitative data in a way that would not be possible manually. Furthermore, its functionalities are based on the principles of grounded theory coding which can be adapted to suit the needs of other types of qualitative approaches, including thematic analysis (Bazeley and Jackson 2013).

The cleaned clutter-free transcripts containing information that was deemed relevant to answering the research question were then imported and uploaded into NVivo Pro 11. A project incorporating all the materials associated with the analysis process was created in the programme and named with the thesis title. The data yielded from the organisational leaders and the multiprofessional frontline HCWs, combining focus groups and individual interviews, were analysed together in Nvivo. Arguably, analysing the data gained from superiors holding positions of authority and their subordinate frontline workers collectively may be perceived by some readers as a threat to the trustworthiness of the research findings in terms of power differentials. However, this was not considered a significant methodological concern in this study since the goal was to maximise recruitment and achieve data completeness in order to gain a more comprehensive understanding of the cultural issues that affected IPC practices, based on the perceptions of

participants representing different groups of ESW HCWs from board to ward, as previously mentioned in the Methodology chapter. Although NVivo provides useful quick and efficient tools for organising, storing, retrieving and moving around data, the cognitive and intellectual efforts on the part of the researcher in this study were still significantly time-consuming and labour-intensive. The coding procedures using the software are discussed below.

4.4.3 Definition of coding

Charmaz (2014) advises that coding is the basis of developing analysis in qualitative research. As such, coding is defined in the literature as a process of organising, sorting, summarising and synthesising large volumes of data generated from the accounts of the participants to understand the phenomenon being studied (Charmaz (2014; Creswell 2014; Corbin and Strauss 2015). Patton (2015) describes coding as a way of bringing order to chaos by tagging text with appropriate codes. A code is a label assigned to a word or short phrase of the text representing the phenomenon being studied in an abstract way (Bazeley and Jackson 2013; Saldana 2013).

Three interrelated phases of coding described by Charmaz (2014), namely, open coding, focused coding and theoretical coding, served as the guiding principles for analysing the findings of this study. Additionally, the constant comparison principle, a key intellectual tool that stimulates the researcher's thinking and creativity in inductive analysis (Corbin & Strauss 2015) was used to refine codes supported by memo writing. A definition of each phase is

articulated with a description of the steps taken to establish the concepts, categories and themes that emerged from the raw data, starting with open coding.

4.4.4 Open Coding

Coding in NVivo began by reading each decluttered transcript, line by line, seeking codes or significant information in each segment of the text that was salient to answering the research question (Bazeley and Jackson 2013). The selected codes, known as 'references' in NVivo, were captured by highlighting the required text in each transcript, as shown in Figure 4.1. The highlighted text was then dragged and dropped into storing containers within the system called nodes. In NVivo, a node denotes a collection of references about a category or theme in a project (Wiredu 2016). This part of the analysis is analogous to the process of open coding described by Charmaz (2014), whereby the transcripts are fragmented and divided into coded texts, and the analyst notes important concepts and themes as they emerge from the data. Corbin and Strauss (2015) view these concepts as the building blocks of theory. Although *a priori* themes from the literature were used as prompts during data collection, the codes in this study's analysis were allowed to emerge directly from the participants' views as they naturally expressed them in the interviews. The reason for this was to generate codes that remained as accurate and close to the data as possible (Charmaz 2014).

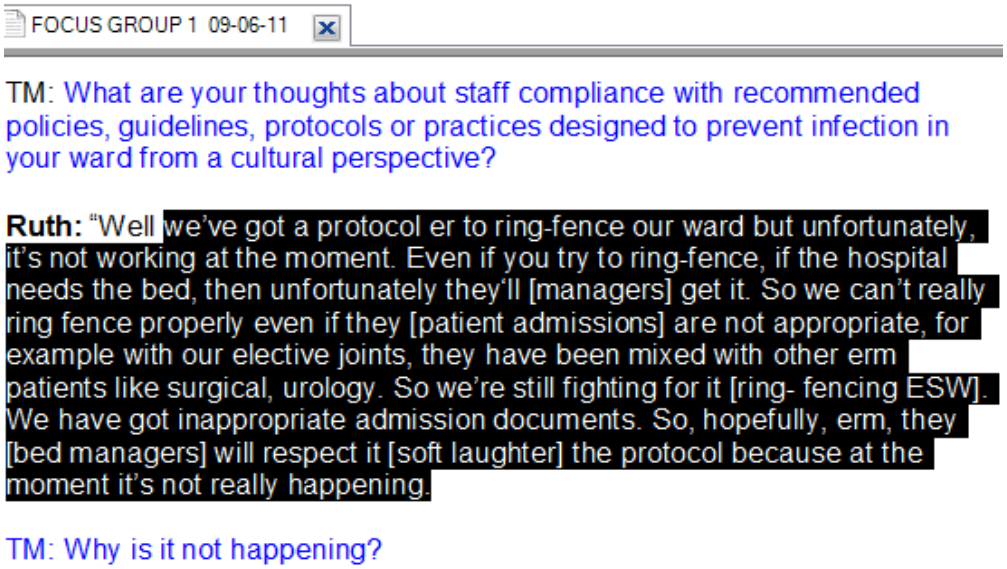

Figure 4.1 Sample of coded text from Focus group 1 transcript

Coding stripes were used to check whether a paragraph had been coded successfully. Coding stripes are coloured bars that show the nodes at which the content of a piece of text is coded, as illustrated in the sample shown in Figure 4.2. The green coding stripe in the example below allowed all the content coded to the node entitled 'resources needed to facilitate compliance' to be viewed. The content appeared to imply that not having immediate and easy access to the essential equipment could be used by a busy healthcare worker as justification for breaching the policy for disposing of used sharps.

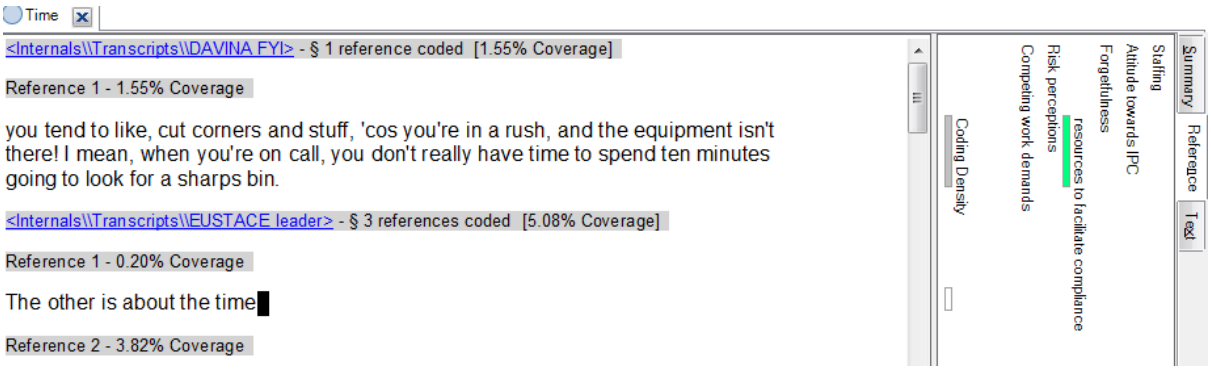

Figure 4.2 Sample illustration of a coding stripe indicating the node in which the text is coded

As repeated reading of the data continued, commonalities in the concepts that had been identified earlier in the open coding phase were noted, representing the beginning of focussed coding postulated by Charmaz (2014), which is discussed in the next section.

4.4.5 Focussed coding

Focussed coding, the second phase of this analysis, involved selecting the most significant and frequently repeated earlier codes with which to sift through a large amount of data, as described by Charmaz (2014). In other words, as previously mentioned, similar concepts identified during open coding were then grouped together and allocated into categories which were assigned labels. During the early stages of coding the data in NVivo, nodes were used to create a thematic framework, illustrated in Figure 4.3, without thinking too much about structuring them, as recommended by Charmaz (2014). The initial focus was on paying attention to what the transcribed data revealed about cultural issues that affect IPC practices in a ring-fenced ESW from the perspectives of the participants.

Whilst NVivo offers useful multiple features with which to explore the coded data further, no explicit guidelines could be found to advise the best way to carry out this process or offer guidance on how to determine the most pertinent feature to focus on. This is the stage at which it was understood why various authors in the literature emphasise that the researcher is the

primary tool for analysis and that the software does not actually analyse the data per se (Charmaz 2014; Corbin and Strauss 2015; Patton 2015).

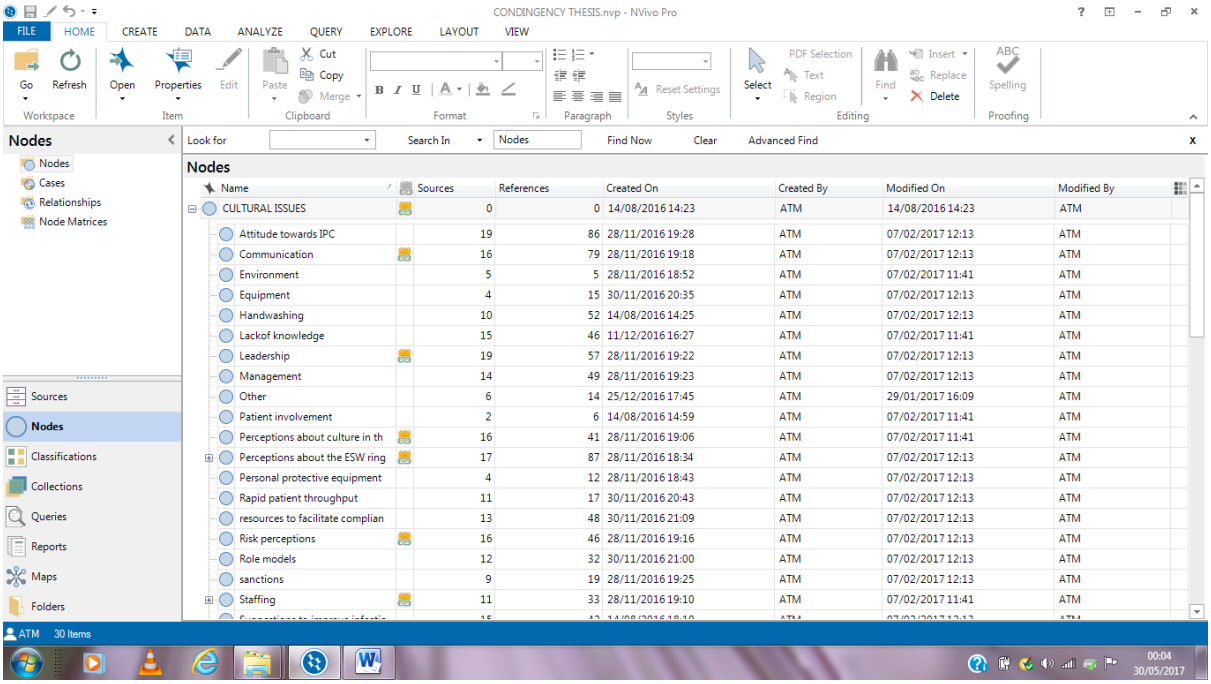

Figure 4.3 Sample of the initial thematic coding framework

Nonetheless, Bazeley and Jackson (2013) encourage researchers to try out the various analytic capabilities available in NVivo and choose the one that best serves their background and context, in terms of their software skills and available time. Therefore, this is what was done.

During the early exploration stage of the analysis, in an attempt to make sense of the coded data, the ‘word frequency query wizard’ was used to find the most frequently used words in the interview transcripts. However, the content generated was not useful in answering the research question. “Infection” was the most frequently mentioned word by the participants, but the contexts in which it occurred were not representative of cultural factors affecting IPC expectations in the ESW when viewed in the ‘word tree’ feature

of Nvivo. Therefore, it was decided to stop using queries, and instead, visual tools in the form of mind maps were employed to facilitate the structuring of nodes into groups and sub-groups in a hierarchical fashion based on the concepts and categories identified in the coding framework. The mind mapping tool enabled a bigger picture of emerging ideas to be seen clearly in the detailed view of the system at a glance. Figure 4.4 shows an example of a mind map illustrating concepts and categories developed into a theme entitled 'Excuses for justifying suboptimal IPC practices'.

Thus, the nodes in the thematic coding framework were re-arranged into a hierarchical branching tree structure in which subcategories (child nodes) were placed under higher level categories or parent nodes (Bazeley and Jackson 2013; Charmaz 2014), as shown in the sample in Figure 4.5. As Charmaz (2014) also points out, the hierarchical branching of nodes helps to bring order to the data and is open to revision based on new understandings as the project develops and evolves.

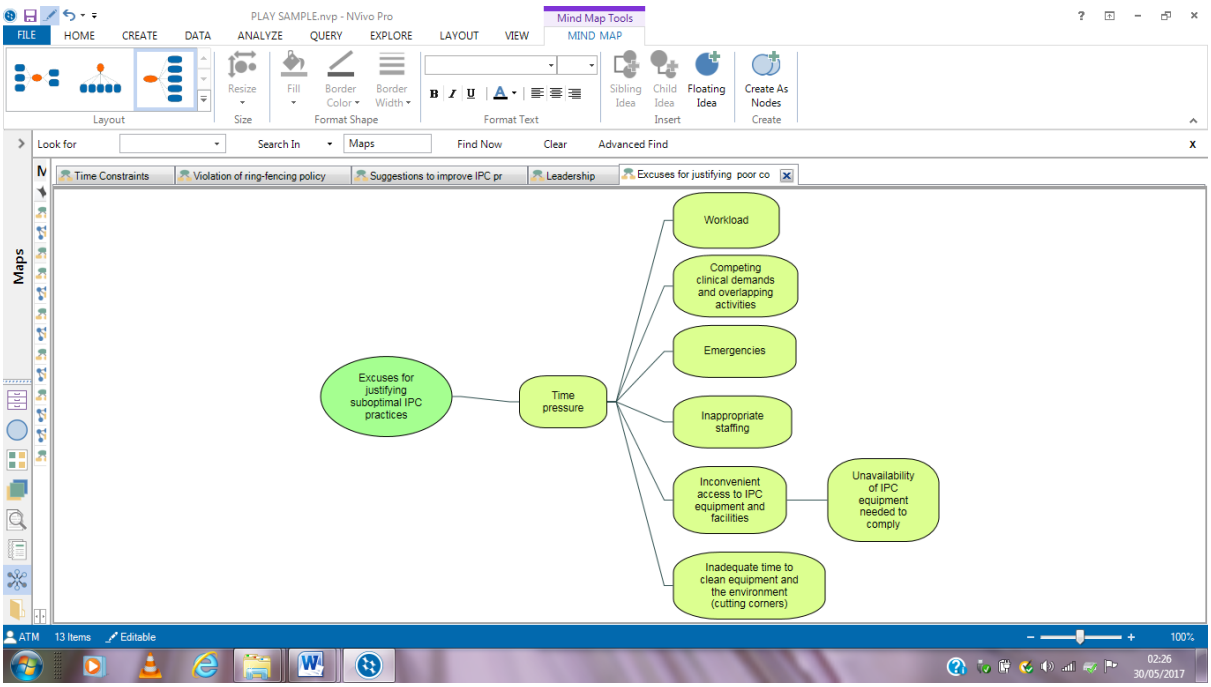

Figure 4.4 Example of a mind map showing the development of the theme ‘Excuses for justifying suboptimal IPC practices’

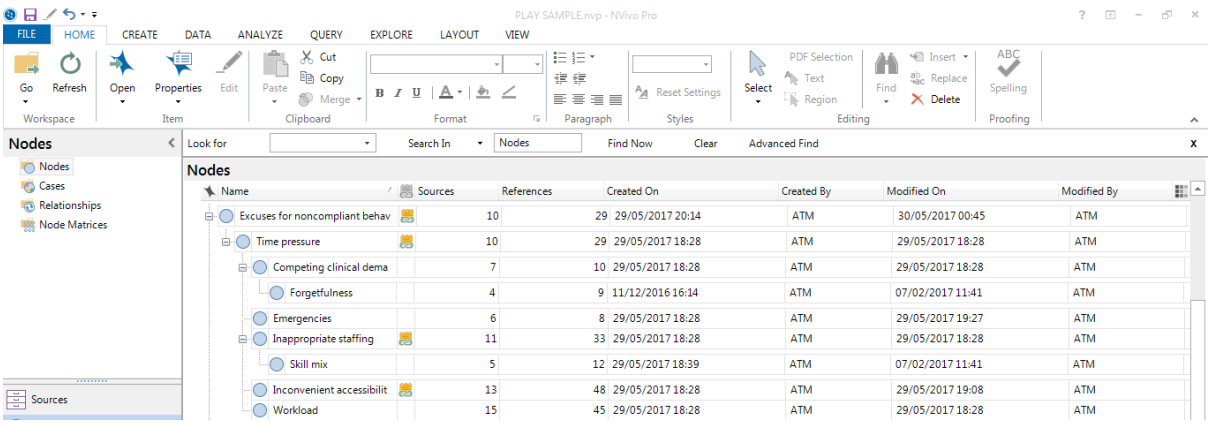

Figure 4.5 Sample of a node hierarchy

As the content of each node was constantly reviewed, new ideas that had been missed earlier in the analysis were picked up. Similarly, as new concepts emerged through repeated interaction with the text, codes that no longer fitted well under a particular node were either abandoned or refined (Bazeley and Jackson 2013; Charmaz 2014).

According to Bazeley and Jackson (2013), visual tools also allow a large amount of data to be condensed and made more manageable. As well as gathering all the participants’ responses about a specific category within one place, the project map function in the system allowed the data to be saved, retrieved, reviewed and moved around easily. Each project map allowed the references from all the sources relating to a particular category or sub-category to be viewed in one place. The sample project map in Figure 4.6 outlines the cultural hospital capacity management issues that were blamed

by the participants for their failure to comply with the ward's operational ring-fencing policy.

As Bazeley and Jackson (2013), state: "when all you know about something is in one place, you can easily review it and you can ask whatever questions about it in relation to any other nodes" (page 104). Additionally, the content in the visual depictions was exported to Word document files, thereby allowing the nodes to be printed out as hard copies and scrutinised closely. This facilitated several modifications to categories constructed in the thematic coding frame in a dynamic way until a point was reached where it was possible to identify the likely connections and relationships between the categories developed in the focussed coding phase.

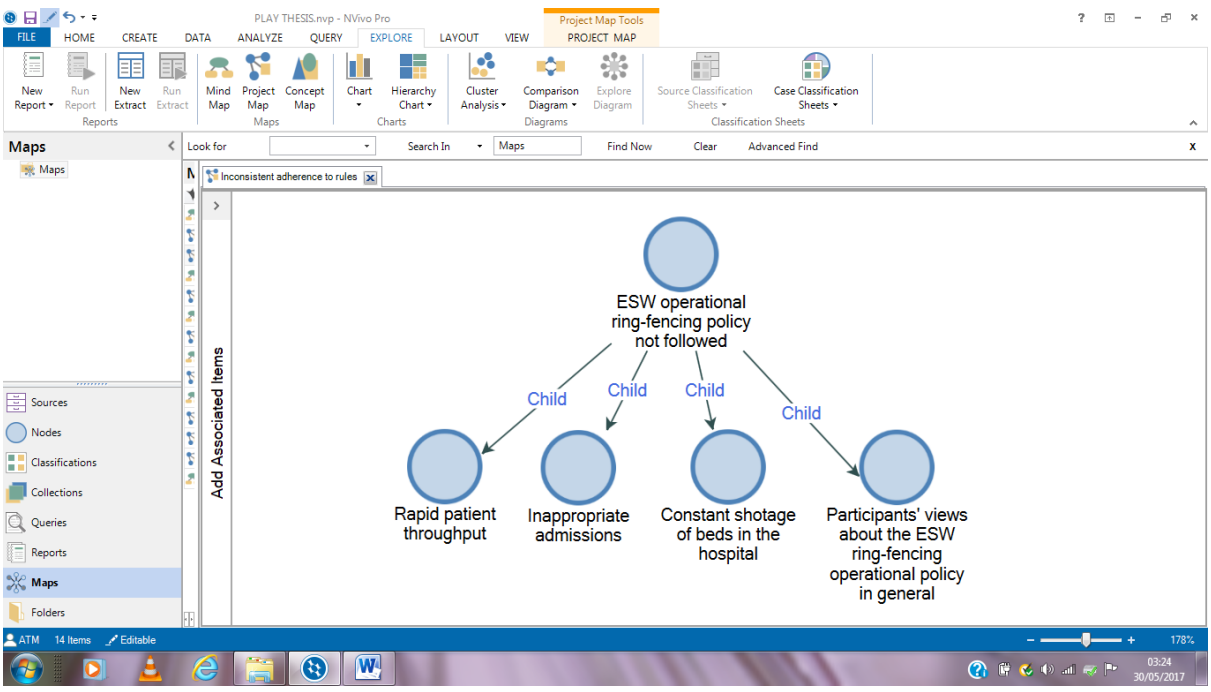

Figure 4.6 Sample project map illustrating the impact of hospital capacity management issues on staff compliance with the ESW operational ring-fencing policy

Arriving at this point in the analysis journey represented a phase referred to in the literature as theoretical coding (Charmaz 2014; Corbin & Strauss 2015).

4.4.6 Theoretical coding

According to Glaser (1992 cited by Charmaz 2014: 63), theoretical coding resembles a sophisticated level of coding that conceptualises how the essential codes or categories may relate to each other as hypotheses to be integrated into a theory. For this study, comparisons were made within and across the contents of categories and subcategories derived from the thematic coding framework to establish connections and relationships between them until themes relating to cultural issues that affected IPC practices in the ESW emerged. This was facilitated by utilising the previously mentioned project map facility (see Figure 4.6) supported by comparison diagrams, as shown in the examples below.

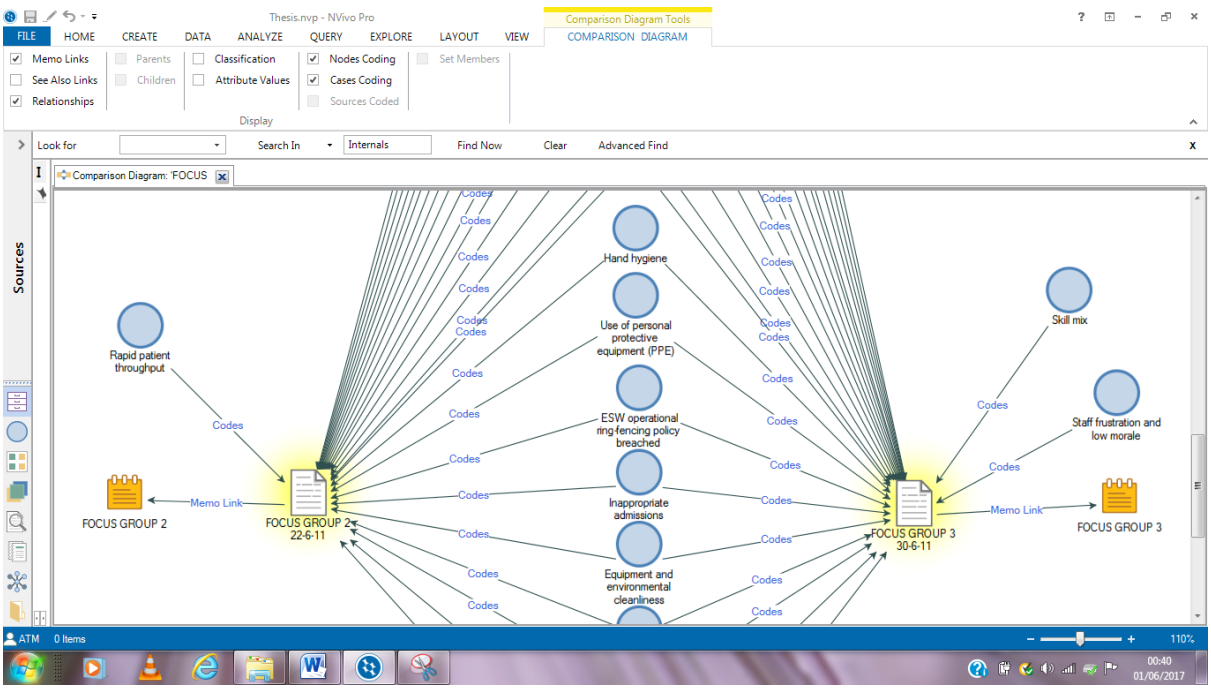

Figure 4.7 Comparison diagram comparing Focus group 2 and Focus group 3 nodes

The sample of a comparison diagram in Figure 4.7 illustrates the similarities and differences between the focus group 2 and focus group 3 transcripts. The shared themes are shown in the centre of the diagram while the differences appear on each side of the diagram. Similarly, Figure 4.8 demonstrates an example comparison of nodes, in this case ‘Hand hygiene’ and ‘Role models’. Double clicking on any item in the diagram, whether it be a source, node or a linked memo, allows the contents of each item to be visualised fully in the detailed view of the software.

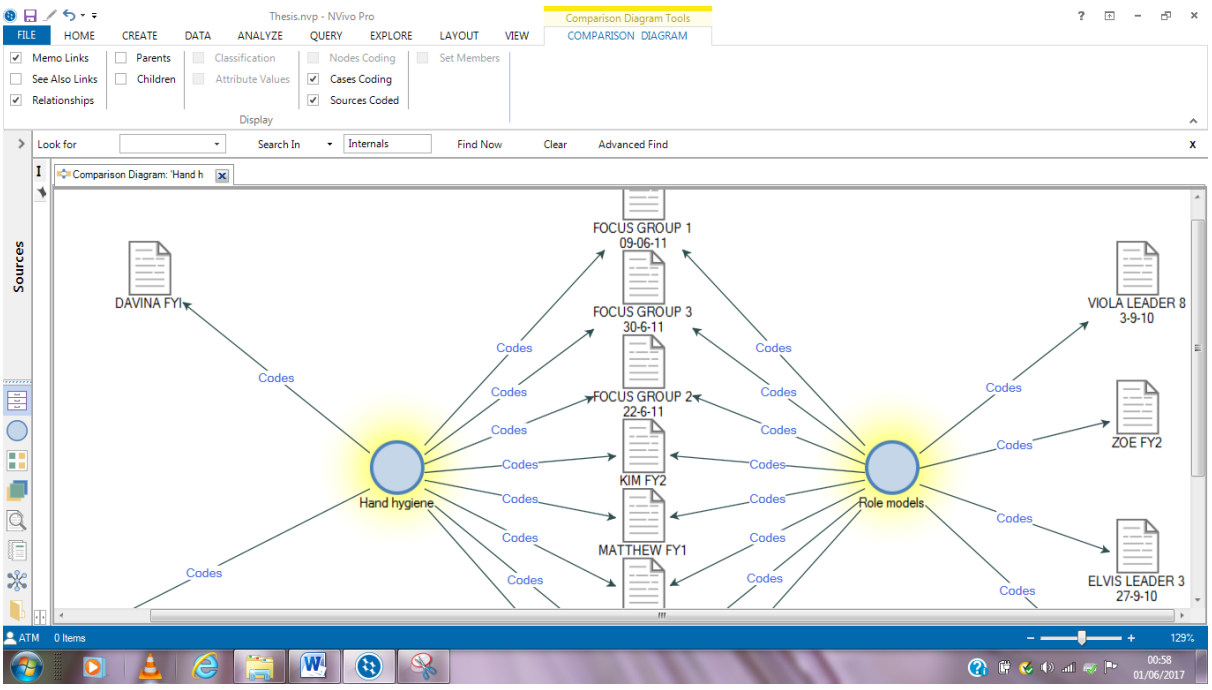

Figure 4.8 Sample comparison diagram comparing two nodes

At this point it seems pertinent to highlight that the analytical decisions made during the coding process, the summaries of the coded data, and the thematic framework generated in the software were shared and discussed with the university thesis supervisor. On many occasions, supervisory

sessions prompted a re-think and re-organisation of concepts to different nodes or categories within the thematic structure as the analysis progressed. This is believed to have been helpful in minimising the risk of subjective misinterpretation of the data on the part of the researcher, thus enhancing the credibility of the findings. Capturing analytical activities was facilitated by writing memos in order to keep up to date with this task throughout all the coding phases.

4.5 Writing memos

Memo writing was used as an analytical tool to keep track of the activities performed from the start to finish across all the coding stages. According to various authors, (Bazeley and Jackson 2013; Charmaz 2014; Patton 2015; Bryman 2016), the use of memos to record the researcher's thoughts, insights, reflections, observations and the decisions made during the coding process is a pivotal aspect of generating theory in qualitative analysis. In relation to this study, the electronic memo-linking tool in NVivo was used to record the decisions made throughout the coding process.

During open coding, a memo was linked to each transcript and unsophisticated notes were written about ideas that came to mind to clarify what the participants' own words were conveying. In the case of the focussed coding phase, a memo was linked to each node created in the coding frame and a short summary of thoughts, impressions and interpretations about the contents of that node was typed. Whilst reviewing and refining the node

structure based on emerging new understandings, reasons for either changing a node or creating a new one in the coding frame (Bazeley and Jackson 2013), were documented. Similarly, whilst working through the final thematic mapping visual images, memo writing encouraged iteration between the data as the abstract codes were developed into categories while comparing and examining relationships between them to identify theoretical connections.

At the beginning, memo writing was perceived to be a daunting burdensome task. However, the guidance given by Charmaz (2014) about keeping the notes simple and not paying much attention to grammar was found to be very useful in allaying these fears. The idea that the memo notes could potentially become the starting point for drafting the findings chapter was also encouraging. It is worth mentioning that the analytical memos were kept separate from the reflexive journal, which was created as a tool to reflect on the progress of the whole project as well as acknowledging the subjective aspects of conducting the research and their potential influence on the study's findings.

4.6 Chapter summary

This chapter has presented the analysis process starting by describing how data derived from the participants were transcribed, followed by an outline of the coding procedures used, and an explanation of how the concepts,

categories and subcategories were developed into generating theory related to cultural factors affecting IPC practices in the ESW.

The overarching theme to emerge from the data was the legitimisation and subsequent tolerance of noncompliance with IPC policies and procedures by HCWs, resulting in the espoused delivery of high quality safe care for elective surgical patients through ring-fencing of the ESW not being sustained. The related subthemes included: (1) managers overriding the ESW operational ring-fencing policy when there was a lack of capacity in the hospital; (2) time pressure; (3) absence of sanctions for poor IPC practice; (4) negative role models; (5) lack of clarity about IPC expectations due to poor communication; and (6) the personal belief system of the practitioner about IPC across the various professional groups. The next chapter presents the findings of the study.

CHAPTER 5: FINDINGS

5.1 Introduction

This chapter presents details of the current study's findings, which explored issues affecting IPC practices in a ring-fenced acute hospital ESW. Examining and elaborating the findings will facilitate deeper understanding of the reasons for inconsistent staff compliance with the recommended requirements for the prevention and control of HCAI in this setting from a cultural view point. The findings challenge the sustainability of ring-fencing the ESW as a discrete component of a busy acute hospital. This study revealed that the culture within the ESW was one in which noncompliance with IPC policies and procedures was legitimised and subsequently tolerated across the various professional groups, especially when the larger organisation, i.e., the acute hospital, was under stress. Frequent examples of dissonant behaviours were revealed by the participants whereby staff espoused the necessity to follow IPC rules and procedures but, at the same time, admitted that they frequently breached such procedures, proffering a number of different rationales for such behaviours.

Deviance from the IPC policies and procedures was allied to: (1) the overriding of the ESW operational ring-fencing policy by managers when there was a lack of capacity in the hospital; (2) time pressure; (3) absence of

sanctions for poor IPC practice; (4) negative role models; (5) lack of clarity about IPC expectations due to poor communication; and (6) the personal belief system of the practitioner in relation to IPC, across the various professional groups. As a result, culturally, compliance with IPC requirements was not always regarded by HCWs as their prime concern in the context of managing other competing patient safety priorities in the ESW. Each of these themes is described in detail in the following sections and substantiated by illustrative quotes using pseudonyms, starting with the overriding of the ESW operational ring-fencing policy.

5.2 Overriding of the ESW operational ring-fencing policy

The ESW operates a policy for ring-fencing elective surgical beds established to reduce the risk of HCAI spreading to patients undergoing elective joint replacement operations and other clean surgical procedures. The policy requires all patients to be screened using admission criteria approved by the organisation to rule out any risk factors or potential sources of infection. Frontline participants and clinicians blamed hospital capacity management issues for hindering their ability to consistently comply with this operational policy. They expressed frustration that their decisions in regard to reinforcing the policy were often overruled by managers resulting in its violation, especially when there was a constant shortage of beds due to high bed occupancy in the hospital which had become a norm, as the following excerpts demonstrate:

> “Well we’ve got a protocol er to ring-fence our ward but unfortunately, it’s not working at the moment. Even if you try to ring-fence, if the hospital needs the bed then unfortunately they‘ll [managers] get it [the bed]. So we can’t really ring fence properly.” [Ruth, Ward sister, FG1]

> “There are policies but the trouble with them is, they are not being fulfilled; like the admission policy, the rule that you can’t admit [unsuitable patients] on this ward. They [admission protocols] are not being followed. You’ll still gonna be overruled by those higher than you. All you can do is do an incident report, that’s it!” [Stella, Ward sister, FG2]

To minimise the risk of infection transmission, inappropriately admitted patients had to be isolated in single rooms where possible. However, if there was no single room available, these patients would be nursed in open bays, as explained below:

> “Most of the time you find patients who are not supposed to be on that ward [ESW] who are there and because of the pressure of beds everywhere, they [managers] just put any patients anywhere. They [managers] say they will put the patients in the side room but if there is no space in the side rooms, they can find space anywhere on the ward. It’s not really following the real protocol or policy of ESW.” [Harry, Physiotherapist, FG3]

> “I mean, I thought the policy was, it's supposed to be a clean ward but bed managers and various different people seem to put people [inappropriate admissions] in there [ESW]; so I don't know, erm, but, I know that they [nursing staff] try and put them in side rooms, or they try and keep all of the surgical patients in a bay together, which I guess is as much as the nursing staff can do, and they follow that kind of protocol.” [Davina, Doctor]

Additionally, performance pressure in the busy A&E department seemed to present a challenge in relation to ESW staff’s ability to uphold the operational ring-fencing policy. In particular, the national A&E four hour waiting time target was believed to interfere with the safe management of patients in the ESW, as pointed out in the following excerpts:

> “You have a ward like JRU [ESW] for instance, that’s supposed to have elective, clean orthopaedic cases, where patients are screened and they’re MRSA negative [pauses] and then suddenly because you need beds and there’s a four hour target that we have to achieve, not a clinical target [emphatically]; a four hour target, there’s a difference; [pauses] four hour target achieved and a patient is not screened! And perhaps a dirty case, as in either infection or a bowel problem, is put into a bed in a ward which is supposed to be a ring-fenced ward!” [Isayah, Leader]

> “I know they’re looking for four hours A&E [target] and just put them [patients] anywhere… managers are looking for quantity and not quality.” [Harry, Physiotherapist, FG3]

The participants, particularly the nurses, claimed that rapid turnover and throughput of patients limited their ability to perform discharge cleans thoroughly before admitting subsequent patients. It was emphasised that a lack of capacity in both the ward and the hospital meant that beds had to be cleaned quickly to accommodate people who were waiting to be admitted, as two healthcare assistants explain below:

> “Quite a few times lately, we’ve got patients waiting for the bed before the bed is even empty! So you are literally admitting patients in corridors, offices [soft laughter] wherever can be possible. So you’ve got to do the bed as quick as you can to get them [patient] in it.” [Gemma, Healthcare assistant, FG1]

> “On ESW we have a lot of discharges that need to be done quickly, and we have a lot of admissions that come in and need to be done quickly. Nine times out of ten, I could be on a shift and have seven post-ops in on one end whilst having three people getting discharged and having to wash all that area that they've been in. So you could think, ‘Oh, I'll just get it done quick’ [cleaning the bed] and not do it by following the procedure, cos sometimes I've had to [not follow correct

> cleaning procedure]. We've had discharges and within five minutes we've had someone else in that bed, cos we've had them sitting in corridors." [Joan, Healthcare assistant, FG2]

The majority of clinical based participants felt that their voices were not being heard by managers when they raised patient safety concerns associated with the adverse consequences of violating the operational ring-fencing policy. The sentiments expressed appear to suggest that the experience left staff feeling frustrated, powerless and undermined:

> "There's nothing we can do with our joint replacement patients sitting next to an unsuitable patient. What more can we do? The best thing we can do is for them to be isolated in a side room but if there is no side room available, we haven't got a choice and we are not allowed to mix gender in a mixed bay." [Ruth, Ward sister, FG1]

> "What is the point of us having this operational [ring-fencing] policy when they [managers] just can override it?" [Kate, Staff nurse, FG3]

> "We go through quite a strict process in preparing patients, let's say for joint replacement, in terms of their own body cleanliness, the use of antibiotics, the timing of antibiotics and so forth, and to get that muddled up with other cases [inappropriate admissions] where it's not so critical, is wrong." [Elvis, Leader]

However, all the managers indicated that they agreed with this ESW operational policy in principle but maintained that there were occasions when the ring-fencing of beds in the ward had to be compromised for the benefit of overall patient care in the hospital. The following excerpts illustrate this point:

> "Absolutely totally agree with ring-fencing erm beds and ring-fencing an area in terms of providing high quality care for the patients that those beds are ring-fenced for, but on the back hand of that is, I wouldn't want those beds to be ring-fenced to the exclusion of compromising another sick patient's care." [Oprah, Leader]

> "My heart says 'a bed is a bed and a patient is a patient, and if they [patients] need to be in hospital, they need to be in hospital!' [emphatically]" [Wendy, Leader]

> "They [ESW staff] have a ward which is slightly larger than their needs, so they have always had empty beds and they have to fill those empty beds because you cannot run a hospital which has one or two empty beds when patients are sitting in A&E!" [Eustace, Leader]

The issues presented above appear to demonstrate a cultural conflict between organisational and clinical priorities that had unintended adverse consequences for patient management in the ring-fenced ward. Furthermore,

some participants' views appeared to suggest that culturally, a failure to prioritise IPC sufficiently at management level resulted in a tolerance of poor practice that impacted negatively on HCWs' compliance with IPC recommendations in the ESW. This is evident from the following comments:

> "The organisation needs to have a cultural shift from accepting some of the poor practice [pauses], have a certain, erm culture within the organisation to say that, 'We take this as a key priority and we want to have a zero tolerance of any avoidable infection.'" [Eustace, Leader]

> "…fundamentally, there needs to be a strong link between the ward and the board and trust and confidence between those two levels that they all take infection control seriously; and the board sets the tone and the message to staff that it's [IPC] important erm and that the ward-based staff know how to escalate any concerns up the governance structure." [Moses, Leader]

This cultural conflict highlighted by this finding demonstrates that ring-fencing beds for a specific group of people, in this case elective orthopaedic and surgical patients within a hospital for the purposes of preventing HCAI, is difficult to sustain in the current healthcare system against a backdrop of competing organisational demands such as meeting mandatory government targets, compounded by insufficient resources such as bed shortages. The study also revealed instances whereby deficient IPC practices perceived to

have resulted from time pressure were considered as legitimate and even defended by the participants, as presented in the following section.

5.3 Time pressure

The participants blamed a lack of time associated with competing clinical care activities, excessive workloads and lack of easily accessible equipment and user unfriendly physical environments for their failure to comply consistently with IPC policies and procedures designed to reduce HCAI in the ESW. Each of these factors is discussed in the following sections, starting with competing clinical care activities.

5.3.1 Competing clinical care activities

Frontline participants, in particular, expressed a difficulty in coping both practically and cognitively when presented with overlapping clinical demands that competed for their time, especially when dealing with emergencies. It appears that the perceived lack of time available to perform procedures correctly led staff to cut corners and adopt dangerous practices. Consequently, simple IPC measures like hand hygiene, the use of PPE, and decontamination of equipment and the environment, then became undermined and hence less effective. For instance, the risk of infection was not perceived as the most important issue in the event of a cardiac arrest. Instead, prompt resuscitation was legitimised as a priority in order to increase

a patient's chance of survival even if it meant ignoring the requirement to wash one's hands before commencing the procedure, as the following excerpts illustrate:

> "I just think, the only reasonable explanation for these measures [IPC precautions] not to be put in place would be something like an emergency where you have to tend to the patient quickly, and then you'll have to deal with, erm, infection control, afterwards; say there is cardiac arrest or something like that; obviously you're not gonna stop to wash your hands before you start giving chest pumps, erm, because you have to put into perspective what's safe for the patients." [Sonia, Doctor]

> "I would rather a nurse resuscitate a patient than wash their hands; so I think there are areas perhaps where one would expect an element of noncompliance erm, and clearly, that's a risk assessed judgement that's made at that particular time." [Oprah, Leader]

> "If the emergency buzzer goes off, your instinct is to just get there quick. So you wouldn't think - Oh, stop! I'll quickly wash my hands before I tend to the buzzer." [Joan, Healthcare assistant, FG2]

Similarly, adhering to PPE guidelines was perceived as less important than saving a patient at risk of sustaining an injury from a visible danger:

> "…obviously if the patient is falling, you don't have time to go and get some gloves to then come back and grab the patient as he's falling to the floor." [Sonia, Doctor]

> "… if you are in a bay, it has happened to myself, you observed that another patient in that bay was going to fall, you quickly leave what you are doing to rescue [the patient from falling]. You still have your gloves [same gloves worn from a previous activity] to sit down this patient in order to prevent falls." [Harry, Physiotherapist, FG3]

The urgent necessity to eliminate a visible life-threatening danger to a person's life in order to secure their immediate safety seemed to be a significant priority determinant among competing practice demands in situations where patients needed to be attended to quickly. Although this appears to be a legitimate argument, it creates a dissonance whereby the unacceptable noncompliance with hand hygiene and PPE rules is justified as necessary to save life and ultimately becomes acceptable.

5.3.2 Excessive workloads

Another significant time pressure-related barrier to compliance with IPC precautions in the ESW, perceived by the frontline participants, is excessive workloads. Non-medical frontline staff in particular, expressed concern about being subjected to time pressure through excessive workloads and indicated

that as a result, they were less likely to adopt safe IPC practices, as can be seen from the following excerpts:

> "When you're called to do an assessment and you're called to the phone, sometimes you do just sort of think, 'Oh, I've got to run and get the phone'. You wouldn't think, 'Oh, I've got to wash my hands'" [Palma, Occupational Therapist, FG1]

> "I think, the corners get missed erm you know! I think people cut corners in cleaning things sometimes. If you are in a hurry, commodes might not be cleaned as properly as they should be or as thoroughly because they might want to be used again quite quickly. There's a couple of times when we've got two commodes in the ward and some people buzz all at once… so you very quickly clean the areas where bum cheeks for patients and perhaps where the hands have touched and the back [of the commode] and you don't actually clean underneath." [Kate, Staff nurse, FG3]

Additionally, insufficient staffing levels seemed to be a culturally acceptable reason for not complying with IPC precautions linked to excessive workloads and time pressure. According to several of the nurse participants who attended the focus groups, if there were empty beds in the ESW, some of the nursing personnel would be removed from the ESW to cover staff shortages in other wards in the hospital. Concerns were expressed that managers did

not appear to take into account the fact that the increased patient acuity and larger workload caused the ESW staff to feel overwhelmed as a result of caring for inappropriately admitted patients with medical conditions such as dementia which require more nurses to deliver care. There was also a perception that nurses who remained on the ward would then be over-stretched and would often struggle to cope. It was mentioned that this had the effect of reducing the support available for patients and consequently staff found it hard to provide optimal IPC care:

> "They [managers] think, 'ESW, easy ward! They [ESW staff] don't need that as many staff as what Y ward would need', so they end up taking our staff! Like the other night, they left our whole ward with fifteen patients with two staff nurses and took one to another ward, and that could cause, like you said Adam [referring to the Occupational therapist], bring on more workload and things would get missed."
> [Joan, Healthcare assistant, FG2]

> "As for staffing levels, it's as soon as we've got three empty beds, it didn't matter if we've got fractured neck of femurs which we should not have on the ward anyway that are demented and need two people to look after them; if you've got five empty beds, the next thing we know is, our staff is gone! So patients get less and less support and we get stretched and stretched and stretched until no more and it's ridiculous!"
> [Kate, Staff nurse, FG3]

According to the nursing management, staffing numbers in the ESW were correlated with peaks and troughs in ward activity. As a result, the ESW was deemed to be quiet at weekends and some nurses would then be deployed to cover insufficient staffing levels in other surgical wards, as explained below:

> "The off duties that are done with the nursing establishment are done to reflect time to busyness and times when it's quieter. With surgical wards, we know when our surgery is going to be taking place especially on somewhere like JRU [ESW]; we know it's going to be Monday to Friday, 9am to 6pm. So therefore I would expect the nursing duties to reflect those particular busy times and obviously for nursing numbers to be looked at perhaps over weekend when there is no surgery and we know it's not gonna be as busy." [Eve, Leader]

> "We do tend to use our own staff [to cover staff shortages] on our own wards within our directorate." [Wendy, Leader]

However, ward nurses claimed that they used the quiet time for cleaning equipment; consequently, when staff were taken away, the cleaning was then neglected. In contrast, doctor participants rejected the suggestion that increased workloads and staff shortages should be barriers to compliance with IPC contact precautions, as shown by the following excerpts:

> “Workload shouldn't make a difference to sticking an apron on or a pair of gloves on or washing your hands. Twenty seconds isn't gonna make that much of a difference.” [Matthew, Doctor]

> “It's not very busy on the elective ward at the moment but there always seems to be issues with not enough staff on ward. Erm, people always seem to be stressed by that; but, then again, that shouldn't make a difference to the individual, what they're actually doing, and it doesn't mean that just 'cos you're busy or there's not enough staff around that you can't wash your hands” [Davina, Doctor]

> “Just being busy doesn’t necessarily mean you get bad or worse with your care. Erm, it hinges on the organisational elements of it and your priority setting. So, if you give priority to cleanliness and infection control and even if you’re busy, that could be the first thing that you attempt and other elements of the care could be relegated to a lower level, erm and I think most patients would understand that.” [Elvis, Leader]

The viewpoint expressed above appears to suggest that a HCW who prioritises and values IPC as important would endeavour to uphold IPC standards regardless of a demanding workload.

5.3.3 IPC facilities and equipment

Factors related to the physical environment, including the ease or difficulty of access to adequate supplies of essential resources, were also perceived to impact on staff's time as well as influence their compliance with IPC precautions. Many participants justified their noncompliance by blaming a lack of readily available equipment needed to implement IPC policies and procedures such as hand hygiene, use of protective clothing, decontamination of equipment and waste management. It was mentioned that paper towel, soap and alcohol dispensers were often empty, resulting in some staff not bothering to decontaminate their hands, as described below:

> "I've had a few times, myself, where you go and gel your hands and there's nothing coming out, there's no soap there, or that kind of stuff; the last thing you want is when you go and wash your hands and you realise there's no gel in the dispenser, there's no soap, there's no paper, and you just can't be bothered anymore." [Matthew, Doctor]

> "Sometimes there's not even hand sanitiser around on the ward, or like there's empty ones. I mean it doesn't happen that often, but there are a few times where there are quite a few that are empty [alcohol hand sanitiser / soap dispensers] which obviously doesn't help with hand washing." [Davina, Doctor]

Furthermore, inconvenient or limited access to the facilities and resources required to comply was highlighted. For example, it was mentioned that staff would often leave the room or bed space where care was being delivered in order to find the nearest hand washing basin to decontaminate their hands; in doing so, they risked getting distracted and neglecting to wash their hands, as the excerpts below demonstrate:

> “Sometimes, I've got to a sink before but there's been no soap on that sink in the bay that I'm working in. So I'll have to go to another bay, but then you get, someone asks you a question; so then you'll get talking to the nurse that’s asked you a question and then you're like, ‘Well, I haven't washed me hands’, but you don't really think about it and then you forget about it.” [Bridget, Physiotherapist, FG2]

> “One thing I have noticed in this hospital is that, in my last hospital, at the end of each bed, there'd always be alcohol gel, there'd be a container stuck to each bed where you could easily get access to alcohol gel. I haven't seen that here [this hospital] at all. It could potentially just make everything easier; so instead of, you're in the ward, you see that patient, you go and wash your hands or get the alcohol gel which is far away and then the next patient, and you have to go out of each bay, it's just kind of off-putting.” [Kim, Doctor]

A lack of conveniently located clinical waste bins in the ward also emerged as a barrier to compliance with the waste segregation policy. Participants across all the focus groups admitted that this policy was being breached, pointing out that some HCWs had been seen inappropriately discarding gloves in non-clinical waste bins. The absence of clinical waste bins in bays was blamed for the noncompliant behaviour observed among staff, as illustrated in the following exchange of views between two participants from focus group 1:

> "We haven't got orange [clinical waste] bins in bays." [Gemma, Healthcare assistant, FG1]

> "It's always the toilet or the bathroom [where clinical waste bins are located], I'm sure the bathroom we can remove one [clinical waste bin] and put something visible [orange clinical waste bin] on the bay cos if they [staff] couldn't find the orange [clinical waste bin], what's the next bin? So that's our problem. There is no visible orange [clinical waste] bin for every bay, so, there you go! I'm not blaming that it's only doctors, but most of it, I've seen doctors throwing gloves in a green bin [recycle waste] or white [household waste bin [laughs]." [Ruth, Ward sister, FG1]

At the time the research was undertaken, clinical waste bins were only designated in patient toilets and bathrooms but not in bays, according to the guidance that had been produced by the infection prevention and control department for the ESW. Participants argued that placing clinical waste bins

in bays would improve accessibility and render it easier for all members of staff to comply with the waste segregation policy, as demonstrated in the excerpt of dialogue below, between participants from focus group 2:

Stella: “In the ESW, we're not allowed to have, you know, the orange [clinical waste] bins in the bays.”

Joan: “ It would be a lot easier for us to have a big orange [clinical waste] bin in a bay than it would in the toilets cos we, we throw so much in the orange [clinical waste] bins, and nine times out of ten, you're carrying something.”

Stella: “But apparently it's for infection control as well.”

Joan: “Apparently infection control [ward protocol] we're not allowed to have the orange [clinical waste] bins or something.”

Stella: “in the bays, yeah, just in the bays; they're [clinical waste bins] kept in the toilets.”

Joan: “So if you've got something like a bit of gauze with blood on, you've got to go walking round into the toilet with it in your hand, rather than just going to the bin.”

Bridget: “and then people just end up putting it in a normal bin [household bin] or drop it on the floor or something.”

Stella: “We should have at least a bigger [clinical waste] bin in the toilet.”

Joan: “especially for gloves and aprons, cos if I'll be honest, nine times out of ten, when you're in a bay, you then go to put it in the actual normal bin [household waste bin]. You just think, and then you end up having to go in there [household waste bin], get it out to go into the orange [clinical waste] bin, cos you end up having to walk round to find the orange [clinical waste] bin [laughs].”

Similarly, a focus group 3 participant blamed the supply of incorrect waste bins in the bays as the reason why the ward had failed waste management compliance audits as expressed below:

“We’ve failed quite a few times on a couple of audits; we’ve been marked down cos gloves have been put into wrong bins [non-clinical waste bins] because the domestic staff had put the wrong bins [non-clinical waste bins], then we found that we’ve actually got the wrong bins anyway!” [Kate, Staff nurse, FG3]

Having resources such as clinical waste bins and hand hygiene cleansing solutions within reach was believed to improve compliance with the standard

IPC precautions. It was pointed out that the mere availability of alcohol hand sanitiser at the bedside acted as a reminder for staff to decontaminate their hands:

> “Easy access, easy access, the fact you've got gel everywhere - the things that you need to comply are there for you.” [Matthew, Doctor]

> “By having stuff visually in front of you, stuff close to you near you. I always use the squirt stuff [alcohol hand rub] just because it’s there. It’s easy to use; I think that could improve compliance.” [Grace, Student nurse, FG3]

On the whole, however, simplifying IPC processes was perceived to be a way of ensuring a well-organised physical working environment that enables staff to work smartly without having to waste time and effort looking for the resources or equipment needed to deliver care, as the following excerpts illustrate:

> “ ‘Releasing time to care’ and the ‘Productive wards’ could actually help with infection control because if every ward was laid out the same, so that a needle is in the same place on X ward as it is on Z ward, a

nurse wouldn't necessarily have to access ten rooms to find the same piece of equipment." [Wendy, Leader]

"Good examples are on D ward where they streamlined the whole thing, like storage of kits and equipment. So, the nurses don't have to come to the store room and dump all the boxes to find what they need. It's very easily kept, stored nicely and items which are confusing, they [ward D staff] clearly label with a picture and save time." [Eustace, Leader]

5.4 Lack of sanctions for poor IPC related practices

An absence of robust systems to deal with IPC related suboptimal practices was another factor perceived to represent acceptance of poor behaviours adopted by HCWs in the ESW and the entire organisation. A lack of rigorous measures to address poor practice was believed to be the reason for complacency and noncompliance among staff by the majority of the participants. There was a consensus among all the focus groups and some leaders that suboptimal practices persisted because of a lack of discipline in the form of sanctions, as explained below:

"There is no enforcement to all these policies, there is no enforcement. If somebody is not doing what they're supposed to be doing, who will arrest them? Who punishes them? There is nothing happening,

> nothing! If a doctor is not washing their hands and they're told that they should wash their hands and after several times they do the same thing, what happens after that?" [Harry, Physiotherapist, FG3]

> "There's nobody watching them, [staff] there's no matron or sister watching them you know, erm which they would be punished or told off for something that they have done wrong; nowadays it just doesn't happen!" [Isayah, Leader]

The majority of participants called for people to be held accountable for failure to comply with IPC measures. They proposed that punitive consequences for noncompliance should be put in place. It was suggested by the majority of participants that management should send a clear message to all staff in the organisation, regardless of seniority, warning that failure to comply with IPC policies would trigger a penalty, as demonstrated by the excerpts below:

> "… name and shame if staff don't do what they are supposed to do. It's sort of something that's harsh but I think it would make a difference." [Esther, Physiotherapist, FG1]

> "…erm, name and shame some people! I think that's what we have to do. Erm, organisations that are more ruthless than the NHS tend to keep the good staff and the staff they keep work to a better standard because they know that there is something at risk; potentially their job is at risk, erm and whilst I don't want anyone to lose their job in one

> sense, I do want the best outcome for the patient. So patients must come first; that's what we're about!" [Elvis, Leader]

However, a few non-medical managerial participants disagreed with this approach, arguing that holding people to account in this way could be a barrier to compliance because people may feel so fearful that they would then be more likely to make mistakes. Instead, they appeared to advocate a culture of openness and learning in which HCWs are supported and encouraged to report mistakes so that lessons can be learnt from them:

> "I think erm staff need to feel that they are well managed, they're clear of what they should do and they feel supported erm and that we have an open culture within the organisation that when things do go wrong, er, recrimination doesn't happen; that we use er the opportunity to learn from mistakes rather than chastise [pauses]. So I think staff need to feel that they will be supported." [Moses, Leader]

> "Bullying or holding people to account in a wrong way can be a barrier because people become so fearful that they make mistakes." [Oprah, Leader]

In taking this stance, it could be speculated that these managers appeared to divert attention away from their own failure to demonstrate compliance with

the operational ring-fencing policy, thus allowing themselves to escape punitive accountability for breaching this rule. Excerpts below from the data seem to suggest that managers were expected by those they managed and others to abide by the set rules too:

> “Practise what you preach!” [Ruth, Ward sister, FG1]

> “Do they [hospital auditors] audit not only on the ward, but do they audit the decisions made by managers if they decide to put an inappropriate patient in one ward? Would that be audited? Would there be sort of any enforcement or blame?” [Sophie, Occupational therapist, FG3]

Additionally, the deployment of individuals with authority to police compliance and challenge poor practice was also suggested as an effective way to enforce policy compliance. There was a general belief among participants that leaders who are strict and professional reinforce rules and influence compliance, as the following comments illustrate:

> “I think leadership does make a difference because if you have a ward manager or a matron who erm worries about things like the hair at the back of your collar or your uniform is checked and clean, I think if you

had someone, a manager who is strict on those things, then people would do them!" [Esther, Physiotherapist, FG1]

"Some people are scared of authoritative figures like matrons and therefore are more likely to follow rules just because they don't want to be seen not complying" [Zoe, Doctor]

Many of the participants thought that staff were more likely to comply with rules that they would not normally perceive as necessary if those in positions of authority reinforced them, for example, if the matron went round and reminded them: "You need your hair up" or, "You're not bare below the elbows." [Davina, Doctor]. In addition, the use of continuous monitoring and the presence of compliance monitors were believed to deter people from adopting poor practices. Another cultural related factor believed by the participants to influence compliance, especially with regard to hand hygiene precautions and the use of PPE, was the behaviours of managers and doctors as role models, which is addressed in the next section.

5.5 Role Models

First, it is worth mentioning that what people say they do can be entirely different from what they actually do in reality (Schon 1991). In relation to this

study, when the participants were asked their thoughts at the beginning of the interviews about HCWs' compliance with IPC requirements in the ESW, the responses were positive, as shown in the examples below:

> "We have a very strong compliance culture on JRU [ESW] for infection control because of the nature of the work that we do, orthopaedic infection in bones is not a good thing. So we're a very clean elective surgical ward. So infection control is a high priority" [Ricki, Leader]

> "I think generally compliance is quite good on this ward [ESW]. I know that the staff are very good and in terms of going round on ward rounds and patient care, they always pay attention to wearing gloves and washing their hands after patient contact" [Zoe, Doctor]

> "I feel that, you know, washing hands, people are compliant on a day to day basis" [Esther, Physiotherapist, FG1]

> "We adhere to the policies, you know like hand washing, putting aprons on, using gloves" [Adam, Occupational therapist, FG2]

However, when the participants became engrossed in the interview discussions and spoke more freely and candidly, they revealed that, in reality, the IPC practices adopted by various HCWs in ESW were suboptimal. Several participants perceived that doctors did not fully recognise the importance of complying with IPC recommendations, especially hand

hygiene, BBE and disposal of clinical waste. This finding contradicts the zero tolerance attitude towards the notion of workload disrupting hand hygiene and PPE rules expressed by doctor participants earlier in this study. Moreover, the views of non-medical participants appeared to suggest that both senior and junior doctors are perceived as role models for other healthcare professionals as can be seen from the following excerpt:

> "…doctors should know better than us [pauses]. If I know that I am supposed to dispose gloves in the orange [clinical waste] bin, they should know as well because we are all surrounded by infection control materials [information] so, it's a matter of that they are ignoring [complying with IPC policies]." [Tasha, Student nurse, FG1]

> "Well, it also falls in, you know, other senior people's role modelling. If someone erm you know, walks onto the ward and uses the [hand] disinfectant, you follow on that. But sometimes I think erm certain people tend not to do that [use the hand disinfectant] and then you follow their lead. You just think, if they are not doing it, you know, you just walk past it [hand disinfectant] and there's a tendency then to overlook it sometimes… a lot of the times, doctors you know, they walk on the ward, you know they don't do anything [clean their hands] and they just walk straight to the patient and out of the ward. I think that has a big impact, especially on newer staff." [Palma, Occupational therapist, FG1]

> “What about having your arms naked below the elbow? Does that come under infection control? That doesn't apply to most of the consultants who come in suits!” [Adam, Occupational therapist, FG2]

Furthermore, the participants highlighted examples of a poor compliance culture in relation to hand hygiene and PPE guidelines which they claimed to have witnessed among doctors during the course of their work, as demonstrated in the following extract of dialogue between focus group 2 participants:

> **Adam:** “They [doctors] even touch the bandages and the dressing, and they open it [wound] by hand.”
>
> **Bridget:** “Yeah, they do actually.”
>
> **Joan:** “Even consultants and registrars have come in [ward] and just gone, like that, [imitates poor practice seen] lifted it open [wound dressing], then gone, ‘Can you put another dressing on that patient?’, and they are the persons that have done the op, and you think, “You must know about infection, why are you doing that - just leaving it [wound] open?””
>
> **Bridget:** “but it isn’t right..”

Similar discrepancies were confirmed by focus group 3 participants, as shown below:

> **Kate**: “Like Harry has been saying, [pauses] senior doctors, consultants - I don’t really see many consultants, certainly Mr Blobb, washing their hands at all on the wards. I just see them swerve in and swerve out! I don’t see anything else with like cleaning hands after reading notes, I don’t actually see them wash their hands at all and they tend to draw on people’s legs and then…”
>
> **Harry** [interrupts]: “remove people’s dressings without gloves and without washing their hands!”
>
> **Kate**: “Exactly!”

Although the various non-medical professional participants in the focus groups were keen to highlight the noncompliant IPC behaviours of doctors as representing bad role modelling, the data analysis revealed that they had also observed instances of poor compliance with cleaning among their peers, as demonstrated in the example below involving focus group 3 exchanges:

Harry: "Like we said, dynamap, everybody uses the same dynamap throughout the ward!"

Kate and Sophie: "Um, um"

Harry: "but if you use it [dynamap] in the side room [isolation room] you still take it out to other patients!"

Kate: "Yeah, you shouldn't use the same one"

Harry: "I've never, never seen anyone cleaning them [laughs]. It's not happening?"

Kate: "I am guilty, I haven't done it!"

Harry: "What do you clean it with?"

Kate: "It's supposed to be an alcohol wipe"

Harry: "I've not seen an alcohol wipe but spray"

Kate: It's in a white tab with a red top, I 'm going to show you the wipes Harry [jokingly]

All participants laugh

However, while this suggests that they are influenced by the behaviour of their peers, they failed to recognise that, in doing so, they could be acting as bad role models for each other, and did not regard it in the same critical light as the doctors' behaviour. By contrast, senior staff who modelled positive IPC behaviours were perceived as promoting good practice:

> "…seeing senior staff complying, I think that influences people. Say if you're walking, you know, into a ward and you see a consultant wash their hands, and the rest of the team wash their hands, you kind of always follow the lead" [Kim, Doctor]

> "…everything that you're telling your staff to do-if you are leading by example, I think actually, generally they will follow you" [Gabriella, Leader]

> "I mean, I have seen Dr Cash [consultant] saying to people, "Excuse me, roll up your long sleeves, wash your hands." [Kate, Staff nurse, FG3]

On one hand, the consultant who challenged noncompliant staff over their poor practice was complimented as a good role model and a champion for IPC in the ESW. On the other hand, if people perceived to be role models failed to comply, it was felt that this sends a message that noncompliance is acceptable. Lack of clarity as a result of poor communication and absence of training also emerged from the participants' views as a reason for suboptimal compliance with IPC precautions in the ESW, as presented in the next section.

5.6 Lack of clarity

Participants blamed organisational flaws for a failure to clearly communicate expectations to them, in order to enable them to understand what they were supposed to do to prevent HCAI. It was claimed that top-down dissemination of messages about IPC often failed to filter down to grassroots level, especially when new policies were introduced and when existing ones were updated, as the following comments illustrate:

> "Are wards informed that there is an updated protocol or we are gonna be surprised or guess that it's available on the intranet, cos I haven't seen any like communication saying that there is something that's been updated?" [Ruth, Ward sister, FG1]

> "If there is a new policy on the intranet, it's just there! You are just expected to know that it's just there and the only way you're expected just to know it's there is if you check the internet every single day." [Esther, Physiotherapist, FG1]

The view was also expressed that cleaning products were changed regularly within the hospital but often ESW employees were not informed about the changes. In addition, training to help them to understand such changes was

often lacking, as demonstrated in the extract of dialogue between focus group 3 participants below:

Sophie: “In our department in our assessment rooms, they’ve just brought in, I mean, all our equipment has to be decontaminated now, like every day, once a week and a massive deep clean [pauses], but no one has actually given us any training whatsoever on what products we should use to decontaminate anything, erm sort of how we should like, if it needs a special technique especially the commodes, how long you should be spending on what you’re doing to decontaminate it; no training under whatsoever [with emphasis]! It’s assumed that you would know what you’re supposed to be doing!”

Harry: “Absolutely, Yes, absolutely.”

Kate: “It’s not only that, they change the cleaning products regularly depending on costs; they do and then that’s it! I think since I‘ve been in this Trust for five years, I’ve been through three things to clean the commodes with soap and water, then some sort of Azo wipes which are now sort of going out of fashion and now we have the white tub thing in the sluice now to clean and I can’t remember what the name is.”

Sophie: “Tuffie wipes?”

> **Kate:** "I'm not sure - can't remember, but literally, it's a big tub that you pull wipes out and you clean the commode with that. So in five years they have changed it three times!"
>
> **Sophie:** "and they [authorities making the changes] probably won't tell you when they change!"
>
> **Kate:** "No! That's the thing, isn't it?"

Frontline participants reiterated the need for improved top-down communication by making sure that new IPC policies and updates are filtered down to all workers, including the night staff. They called for consistent IPC information to be disseminated through use of posters and the provision of education and training to empower them with the skills, knowledge and instructions necessary to facilitate compliance. Furthermore, it was stressed that the potential seriousness of the consequences that could result if basic IPC precautions were not consistently followed should be highlighted and reiterated to all staff.

> I think educate people in why it's done [adopting IPC precautions], rather than just telling people, 'this is what you should do', so that people have more of an understanding of why you do all those things." [Davina, Doctor]

> “I just think that people have got to be educated. They won’t know how to do it [adopting IPC precautions] if they are not educated on what they need to do and have more knowledge of what could actually happen from you not washing your hands; like what could actually - the serious things that could happen…” [Joan, Healthcare assistant, FG2]

5.7 Underlying belief systems about IPC

Data also revealed that HCWs’ inconsistent compliance with IPC recommended practices in the ESW was underpinned by either irrational or misconstrued underlying belief systems about IPC held across the various frontline professional groups. The HCWs’ motivation to comply with the IPC precautions consistently was absent when the infection hazard was not obvious to the naked eye, as reflected in the excerpts below:

> “I guess you don’t see directly someone dying as a result of you not washing your hands. It’s quite hard for you to actually think that, that’s actually what might happen” [Davina, Doctor]

> “If you’re just helping on JRU [ESW] where our patients generally are healthy and clean and self-caring, you literally just may be put one hand on their back to support them walking. You don’t help in any other way. When you walk away from that patient, you don’t have the evidence that you have to clean your hands, so you don’t necessarily think about it.” [Esther, Physiotherapist FG1]

> “Sometimes we feel, ‘well, I just made the patient sit on a chair, so is that really an infection, infective thing?’” [Adam, Occupational Therapist, FG2]

This suggests that individuals consider complying with IPC rules when they see evidence of visible harm which they perceive as posing a risk to themselves and others. Deviance from IPC policies was also apparent in the notion that applying IPC contact precautions was pointless and unnecessary in the absence of direct physical contact with patients. In effect, contact with a patient’s immediate environment or documenting notes did not seem to be regarded as posing a significant risk of infection transmission, as the following excerpt illustrates:

> “Sometimes you think to yourself, if you're just going to sit or stand at the end of the bed, are you gonna wash your hands and gel your hands? That kind of stuff… You don't have contact with a patient, you're not exactly gonna go, if you know what I mean, you're not gonna go and gel your hands or wash your hands every time… if you're just touching notes, you're not gonna start gelling your hands every time you see a patient, if you know what I mean. If you have no contact with them [patient], you don't see the need [to decontaminate hands].” [Matthew, Doctor]

> When you're doing a ward round and say you go into a side room and see a patient who has MRSA, and you're not, you know, you're not

> even gonna examine them, sometimes I think, you know, it's just people's mentality that, if they're not gonna examine them [patients] there's no point [to wear gloves and aprons] you know, you can't get MRSA through the air if you're not wearing an apron or gloves, if you know what I mean." [Kim, Doctor]

Disagreement with policies was another source of deviance from IPC rules entrenched in HCWs' belief systems which was highlighted by a consultant participant:

> "You can have a blatant disregard for policies and procedures, if people are objectionable to them. Erm sometimes they omit to do what the policy requires either because they don't believe in it ... erm there is an element of interpretation required, and I think that is a factor for individuals." [Elvis, Leader]

This assertion seemed to be validated by the view of medical participants which highlighted a lack of confidence in the efficacy of hand hygiene in lowering HCAI rates. One doctor even described the BBE policy as being 'over the top' and having no scientific credibility:

> "…there's not a lot of good research into bare below elbows, and wrist, like watches, and rings, and apparently there's research that it doesn't make much difference at all. Like countries, like, Australia don't have

such policies like that. I think it's just, kinda, a bit OTT, with no research base.” [Kim, Doctor]

“I think there's a lot of ingrained [beliefs] in, for example, kind of older consultants who feel that it was fine before [not being bare below the elbows] and that, you know, they weren't kind of wearing short sleeves and nothing happened and they feel that they like to look professional and smart for the patients and they feel that they, I guess, don't like being told that they have to be bare below the elbows and things like that.” [Davina, Doctor]

In addition, other participants’ views seemed to suggest that hand hygiene rules and expectations were impractical and unrealistic for HCWs to follow correctly within the contextual realities of every day practice, as shown in the quotes below:

“I think sometimes with what they say and expect [hand hygiene rules]- like you can’t even go into one area and then step into the other area without cleaning your hands- because if the patient says, ‘Oh! I need this pillow propped up’, you do it and step to the next one without even thinking about it and I know you’re meant to clean your hands when you come out of one area into the next one.” [Bridget, Physiotherapist Focus group 2]

> I think we have to be realistic in understanding what our compliance threshold is, because if you're talking about hand hygiene, it's not just about erm the nurse or the doctor or the HCA [healthcare assistant] going to wash their hands; yeah! they might have washed their hands but how effective did they wash their hands? Erm, so I think we have to be quite clear, quite explicit about what our compliance threshold is, erm and I would argue that a 100% [compliance] is not appropriate; there is always human error [Oprah, Leader]

5.8 Chapter 4 summary

This chapter presented cultural issues affecting staff compliance with IPC policies and procedures in the ESW as voiced by the participants in the study. In particular, it was clearly evident that the ESW operational ring-fencing policy was unsustainable as it was constantly breached, especially when the organisational system was stretched. Factors influencing legitimisation and subsequent tolerance of noncompliance with IPC policies and procedures included managers overriding the operational ring-fencing policy during bed crises in the hospital, time pressure and its associated problems such as overlapping clinical care activities, rapid patient throughput, increased workloads, insufficient staffing levels and lack of sufficient conveniently available equipment and other essential resources needed to comply with the requisite procedures; lack of sanctions for non-compliers, bad role models, poor communication and dissemination of IPC messages from the top to the ground level staff, and prevalent personal belief systems of the practitioners

about IPC across all the professional groups, which often resulted in HCWs taking a casual approach to IPC. It seems that suboptimal practices were allowed to continue unchecked until eventually they became cultural norms in the ESW. As a result, IPC was not considered a priority in the larger scheme of things in relation to other competing patient safety and organisational demands. The next chapter offers a discussion of these findings in light of the reviewed literature.

CHAPTER 6: DISCUSSION

6.1 Introduction

This chapter discusses the cultural issues affecting IPC recommended practices that emerged from the views of the participants in this study in light of the reviewed literature. The question addressed is: What are the cultural issues affecting consistent staff compliance with the recommended IPC practices in a ring-fenced acute hospital elective surgical ward? The purpose was to identify the issues and offer recommendations to address them with the aim of improving HCWs' compliance with IPC policies and procedures in the ESW and similar settings.

The findings challenge the sustainability of ring-fencing the ESW as a discrete component of a busy acute hospital to provide high quality, safe care for elective surgical patients in the context of the current healthcare system, fraught with competing demands, resource constraints and an ageing population. HCWs' personal beliefs also appear to have a significant influence on the extent of their compliance with IPC policies and procedures. The next section considers in more detail whether or not ring-fencing constitutes a viable or sustainable strategy.

6.2 Ring-fencing strategy for HCAI prevention is unsustainable

According to the literature, consistent compliance by HCWs with the evidence-based standard principles incorporated into IPC policies and procedures is required to improve patient safety and quality of care in clinical inpatient settings (Loveday et al 2014; VanSteelandt et al 2015). These IPC measures include good hand hygiene, correct use of PPE, isolation of infectious patients, effective decontamination of equipment and the environment, and the correct handling and disposal of waste and sharps (Loveday et al 2014; The Health Foundation 2015). Every HCW has a legal duty of care to comply with these basic precautions which are recommended as effective means of preventing HCAI in line with the Health and Social Care Act 2008 (DH 2015).

However, this study identified inconsistent adherence to IPC rules by staff working in the ESW. The data revealed that the culture within the ESW is one in which noncompliance with IPC policies and procedures is legitimised and subsequently tolerated across the professional groups, especially when the acute hospital system came under stress. Frequent examples of dissonant behaviours were revealed by the participants. Although staff espoused the need to follow IPC rules and procedures, at the same time, they admitted that they frequently breached such procedures, proffering a number of different rationales for such behaviours.

As described in the findings chapter, culturally acceptable reasons given by the participants for not adhering to IPC requirements were consistently linked to: (1) managers overriding the ESW operational ring-fencing policy when there was a lack of capacity in the hospital; (2) time pressure; (3) absence of sanctions for poor IPC practice; (4) negative role models; (5) lack of clarity about IPC expectations due to poor communication; and (6) the personal belief system of the practitioner about IPC. As a result, culturally, compliance with IPC requirements was not always placed at the forefront of HCWs' minds in the context of managing other competing patient safety priorities in the ESW. Successful provision of high quality safe care for elective surgical patients through ring-fencing of the ESW depends on the identified themes being the reverse of what was found in this study. Whilst these themes remain, it is argued that the policy of ring-fencing the ESW to suppress the risk of HCAI acquisition to elective patients is unsustainable. In the next section, theoretical perspectives from the literature are used to shed further light on non-compliant behaviour.

6.3 Theoretical perspectives to explain noncompliance

Theoretical perspectives identified in the literature review chapter offered by Dixon Woods et al (2013) and Banja (2010) have relevance to the findings of this study. This is because both authors' articles address the subject of culture in the healthcare environment, which is also the focus of the current study. Dixon-Woods et al (2013) conducted a large research project to

examine culture and behaviour relating to healthcare provision and service delivery in English NHS hospitals. Their study adopted a mixed-methods approach, involving collection and triangulation of data from multiple sources encompassing interviews, surveys, ethnographic case studies, board minutes and publicly available datasets. Although this large scale study had limitations, given that it was primarily narrative with no formal protocol, its findings are consistent with the themes identified in this small scale current study guided by ethnographic principles.

Banja (2010) explains the concept of normalisation of deviance and suggests how it should be applied in healthcare delivery. According to Banja, deviation implies violation of an operational rule which is meant to be upheld by all professionals in an organisation to prevent the risk of harm to patients. Furthermore, according to this author, what start as deviations from operational rules become normalised, through sufficient repetitions over time, to the extent where individuals or a group of people no longer regard the discrepancies as untoward, but rational and acceptable. At this stage, it is deemed fitting to apply the theoretical perspectives highlighted by these authors as relevant to guide the analysis of the themes identified in the study. It is intended that this will facilitate deeper insight into how these factors affect HCWs' compliance with recommended IPC policies and practice protocols in acute hospital ring-fenced elective surgical units and similar settings.

Dixon-Woods et al (2013) reported a universal desire to provide the best quality of care for patients expressed by almost all of their interviewees across a variety of NHS hospitals, but also found considerable inconsistency. Similarly, the desire to practice IPC robustly was evident in all the views of the participants expressed in the present study. Maintaining an infection-free environment for patients undergoing elective surgery was seen as an imperative duty of care for all HCWs. In particular, the impression was given that preventing HCAI in orthopaedic cases was taken very seriously in the ESW.

The consequences of allowing an opportunity for a patient to become infected were described by some participants as catastrophic and disastrous. This was based on the perception that bones could be very difficult to heal if they become infected, subsequently causing long-term expensive adverse implications for both the infected patient and the hospital. However, the positive perceptions of the need to prevent infection expressed by the participants did not always correlate with the actual IPC practices adopted by staff in the ESW unmasked by this research. In effect, rule deviation as asserted by Banja (2010), was reflected in the form of noncompliance with recommended IPC policies and procedures in the ESW via the themes emerging from the participants' views. Understanding some of the reasons why the ESW failed to comply consistently with IPC policies and procedures, as highlighted by the present study, may be facilitated by the application of a theory used by Dixon-Woods et al (2013) to understand cultural behaviours in NHS organisations.

Based on social science heuristic theory, Dixon-Woods et al (2013) conceptualise the success or failure of a healthcare system by drawing a distinction between the ‘blunt end’ and the ‘sharp end’. According to their analysis, the ‘blunt end’ of the system denotes a point where decisions, policies, rules, regulations, resources and incentives are generated. Crucially, Dixon-Woods and colleagues point out that the ‘blunt end’ of the system may determine the environmental conditions at the ‘sharp end’, which in turn may directly affect the quality of care delivered to patients by frontline staff.

In relation to the present study, the ‘blunt end’ of the model represents the management’s position. The ‘sharp end’ refers to the location and context in which care is delivered to patients, a position represented by ESW frontline staff. Dixon-Woods et al (2013) warn that, if staff are not mindful, the blunt end may create ‘latent conditions’ that increase the risks of failure at the sharp end. This appears to be reflected in the findings of the current study in the form of a dissonance in priority perceptions between clinical and hospital managerial staff that was tolerated at the blunt end, but which impacted negatively on staff compliance with the ESW operational ring-fencing policy, as discussed in the next section.

6.4 Violation of the operational ring-fencing policy

A cultural dissonance deriving from differences in perceptions of priorities and performance measures of the ESW healthcare outcomes between sharp end care givers, including clinicians and blunt end administrative hospital management staff, was evident from the analysis of the data. This tension appears to be underlined by differences in professional values, accountabilities, roles and responsibilities between the managerial and clinical staff. Moreover, this had implications for rule-deviating behaviours at the blunt end which often resulted in unsafe practices at the sharp end being normalised. Furthermore, it shows just how unsustainable it has become in recent years to implement a ring-fencing strategy for a particular group of patients in an acute hospital setting fraught with organisational complexities and competing demands for scarce resources.

According to the literature, protection of elective inpatient beds by operating a ring-fencing policy is an essential standard required for the delivery of safe, high quality care for patients undergoing orthopaedic and clean surgical procedures (Briggs 2015). This is particularly important in relation to the prevention of HCAI because it is espoused that patients are managed by dedicated staff adopting a strict operational policy, which includes rigorous IPC rules (Soler et al 2013). In relation to this study, the ESW investigated contained protected beds that were dedicated solely for patients undergoing elective orthopaedic procedures, primarily joint implants and clean surgical

operations to prevent HCAI acquisition. This small functional unit also had an established strict admission ring-fencing operational policy incorporating stringent IPC rules.

On the one hand, although ring-fencing is recognised as constituting good practice for managing elective orthopaedic and surgical cases in terms of reducing exposure to pathogens among this group of patients, it can impinge on the smooth running of services and efficient use of hospital resources as a whole. This raises an ethical dilemma for hospital managers who also have a statutory duty to ensure that the entire hospital, and not just the ESW, functions safely and efficiently. Whilst they agreed with the ring-fencing of beds policy in principle in an ideal world, they maintained that there were occasions when it had to be compromised for the benefit of overall patient care in the hospital.

Culturally, this seems to be a classic example of rationalisation of deviance referred to by Banja (2010), whereby individuals convince themselves that their rule-breaking actions are not only legitimate but acceptable and even necessary. Ring-fencing of elective surgical beds was believed to ensure high quality care for a specific group of patients, but managers felt that this should not be to the detriment of other sick patients' care. In their eyes, every patient had a right of access to a bed and they therefore believed that beds should be available to all patients on equal terms. Therefore, this means that

violating the ring-fencing of the ESW for the overall good of all patients under the care of the whole Trust was legitimised as acceptable and beneficial.

Managers were also under pressure to meet NHS targets as well as satisfy commissioning and regulatory demands at the blunt end. Failure by the hospital trust to comply with the nationally driven priorities attracted sanctions and financial penalties. Inevitably, managers' decisions and strategies regarding service provision and patient care delivery throughout the entire hospital were shaped by the overarching NHS priorities. Therefore, achieving the A&E waiting time demand and other targets was the most important focus for them in fulfilling their role responsibility, even if it meant breaching the ESW operational ring-fencing rules.

On the other hand, the focus on meeting targets at the blunt end was not perceived by clinical staff in the ESW as a meaningful measure with which to accurately reflect the care provided to patients and its outcomes. There was a belief among all clinical frontline participants, including consultants, that managers viewed achievement of the four-hour waiting time target in A&E as more important than maintaining the quality of care and safety for the patients in the ESW. By contrast, these clinicians focussed on clinical patient outcomes and therefore deemed protecting their patients in the ESW from infection acquisition as their priority, as the sentiments expressed by participants in the excerpts below illustrate:

> "As a senior doctor, I 'm clearly not wanting to be associated with causing infection; so I want to be sure that what I do minimises the risk of infection. The fact is, what I do is a dangerous job. I can cause infection by operating on people." [Moses, Leader]

> "…and then suddenly because you need beds and there's a four hour target that we have to achieve, not a clinical target [emphatically]; a four hour target, there's a difference; [pauses] four hour target achieved and a patient is not screened! And perhaps a dirty case, as in either infection or a bowel problem, is put into a bed in a ward which is supposed to be a ring-fenced ward!" [Isayah, Leader]

> "I know they're looking for four hours A&E [target] and just put them [patients] anywhere… managers are looking for quantity and not quality." [Harry, Physiotherapist, FG3]

As already seen from some of the example quotations from the data, a major blunt end impediment to compliance with the operational ring-fencing policy mentioned repeatedly by various clinical participants at the sharp end in the ESW was the A&E waiting time target. It was perceived that managers' preoccupation with meeting national targets created obstacles to achieving IPC best practice in the ESW. Despite the existence of a protocol, the operational rule was not consistently adhered to. The participants did not feel that they were fully supported by those at the blunt end in respect to

protecting their elective surgical beds. If there were insufficient beds in the hospital to accommodate patients waiting in the A&E department, available empty beds in this ring-fenced ward would be used. Staff tried to adhere to the admission criteria in order to enforce the policy but they were overruled by managers and prevented from making the necessary decisions about the patients that should be admitted to the ESW. For example, medical outliers, trauma and urology patients, including those with open cholecystectomies, had been inappropriately mixed with elective joint replacement patients.

This practice of admitting unsuitable patients regarded as ‘dirty’ into a supposedly ‘clean ward’ happened so many times over a period of time that it eventually became a cultural norm in the ESW, supporting Banja’s (2010) theory. Rapid throughput of patients from A&E, a blunt end related factor, resulted in a situation where a bed was needed for a patient when another was still occupying it in the ESW. Some patients were even waiting in corridors to be admitted. As a knock-on effect, HCWs at the sharp-end in the ESW claimed that they did not have the physical capacity and time to clean the equipment and the environment following correct decontamination procedures. Participants shifted the blame of noncompliance from themselves and openly admitted that they were cutting corners because of being rushed and under pressure. The environmental conditions created at the blunt-end of the system appeared to affect HCWs at the sharp-end, both psychologically and emotionally.

6.5 Psychological Factors

The views of the participants revealed how the ring-fencing policy created false expectations among ESW staff, and when these were not met, their morale dropped. As previously mentioned, the ESW had a template with questions based on the operational policy that was designed by the authorities to empower staff to make the right decisions about the patients that should be admitted to that facility. Staff felt frustrated that their professional autonomy was being undermined when their power to make those decisions was taken out of their hands by managers repeatedly ignoring the ESW ring-fencing protocol. They felt defeated because they perceived that they could not deliver the high quality safe care that they wished to provide to their patients in a meaningful way. As a result, they felt powerless, desperate and demoralised, as reflected in statements like the following: “There’s nothing we can do with our joint replacement patients sitting next to an unsuitable patient; what more can we do?” [Ruth]; “We have to do as we are told” [Gemma]; “You’ll still gonna be overruled by those higher than you” [Stella]; “We’re fighting a losing battle!” [Kate].

This confirms the findings of Dixon-Woods et al’s (2013) research that staff at the sharp end were often aware of systemic problems but felt powerless to change these. Similarly, a report by Francis (2013) on the inquiry into Mid-Staffordshire hospitals’ care failings unmasked the fact that HCWs who were vocal about deficiencies in patient care were ignored. This led to their motivation and morale becoming low. In relation to the present study, as

subordinates working within a hierarchical structure of authority, the frontline staff lacked the power to challenge the operational rule-breaking behaviour by their managers who were also their bosses. After all, a hierarchical structure of authority dictates what subordinates should do and how they should behave (Schein 2010). Eventually, they ended up losing their willpower to fight to protect their patients and acquiesced with the patterns of behaviour that were tolerated and exhibited at the blunt end of the system, even if they disagreed with them. They also felt conflicted about the notion that those at the blunt end - the people who devised the strict ring-fencing IPC policy and enacted it in the ESW - were the very same people blocking them from implementing it correctly.

It seems that national targets which managers prioritised failed to take into account the complexities of clinical situations in the ESW. Problems that concerned various ground level professionals in their everyday clinical practice were not represented in national priorities. As a result, managers often failed to act upon those clinical safety concerns that mattered to the ESW staff as they continued to direct their efforts towards national priorities in order to satisfy regulatory requirements.

The issues discussed above appear to be synonymous with the highly publicised failings in care quality and safety in NHS hospitals which have resulted in adverse outcomes for patients (Healthcare Commission 2006; Healthcare Commission 2007; Francis 2013), as discussed in the literature review chapter. However, it is important to bear in mind that focusing on the

bigger issues can mean that basic things may sometimes be overlooked by the blunt end of the system. As Banja (2010) points out, it is important to realise that some practice deviations are always likely to occur but this should not be an excuse to legitimise and tolerate unsafe practices that often go unchallenged but might cause avoidable harm to the patient if frequently repeated over time. In contrast, the views of several participants in this study suggest that, culturally, the blunt end tolerated a noncompliant culture towards IPC policies and procedures by those professionals regarded as occupying positions of authority and influence, as is discussed in the following section.

6.6 Blunt end tolerates negative role models

Managers were not regarded by those at the sharp end as leading by example when they broke the ESW ring-fencing rule and its associated protocols. The majority of consultants in the ESW were also considered to be negative role models for hand hygiene and PPE policies. Consequently, this was used as an excuse by junior staff for rationalising their own noncompliance. They were unconvinced of the need to adhere to IPC rules if senior staff that they held in high esteem failed to comply. In other words, their motivations for complying with good practice declined in proportion to the observed rule-breaking behaviours of their superiors.

These negative behaviours modelled by those regarded as superiors and deserving of respect (Ward 2011:1539) were believed to have an adverse

impact on the attitudes of subordinates comprised of various HCWs, and newer staff in particular. As Banja (2010) points out, newer staff can be vulnerable to adopting learning deviant behaviours. Similarly, Erasmus et al s' (2009) participants mentioned the existence of negatively modelled behaviours by experienced HCWs who were noncompliant with hand hygiene guidelines as reasons for their own noncompliance. The influence of role models on the adoption of recommended IPC practices by subordinate HCWs is also highlighted in recent research studies (Stevens et al 2013; McInnes et al 2014).

Conversely, the findings of the present study also suggest that positive role modelling by senior staff influences other employees' willingness to comply. The views of the participants revealed that if consultants in a ward are seen washing their hands, the rest of the team follow their lead. Participants spoke admiringly about one particular consultant in the ESW who had been observed reminding all staff, regardless of their grade or seniority, to roll up long sleeves and wash their hands. The participants' favourable opinion about the observed positive behaviour of this senior clinician appears to support Jenner et al's (2006) assertion that consultants should be actively engaged in efforts to improve HCWs' compliance with IPC precautions. They contend that consultants are best positioned to act as role models for all staff in a healthcare setting. Furthermore, a study undertaken by Stevens et al (2013) revealed that consultants rather than infection control nurses had the most influence over hand hygiene practices because they were seen by most medical staff and others as the clinical leaders in functional clinical units.

Similarly, the current study highlights the importance of needing to engage consultants and other leaders in championing best IPC practices to improve compliance among HCWs in the ESW. As McInnes et al (2014) suggest, the notion of leaders as role models may determine the type of culture that can either support or hinder staff compliance with IPC recommendations in a clinical setting. The same authors suggest that senior clinical and nonclinical leaders should be seen to champion best IPC practices and make it clear to their staff that noncompliance is culturally and professionally unacceptable within the organisation. Their participants felt strongly that mandating senior managers to model hand hygiene positively would improve staff compliance at ward level. Apart from tolerating poor role models, the blunt end was blamed for perpetuated rule-breaking behaviours among staff due to the absence of a robust system to deal with policy offenders both in the ESW and the entire organisation. This is discussed in detail in the next section.

6.7 Blunt end lacks a robust system to hold non-compliers to account

The consensus among all the focus groups and consultant leaders appears to suggest that suboptimal practices persist because of a lack of discipline in the form of sanctions. They felt very strongly that soft approaches often used in the NHS for dealing with noncompliance were ineffective. The belief exists that people fail to comply because they think they can ‘get away with it’. Thus, these clinical participants were in favour of punitive action, for example, naming and shaming people who fail to comply with good practice, regardless

of seniority. This finding matches those of previous studies which suggest that suboptimal practices persist in the absence of institutional sanctions (Whitby et al 2007; Dyson et al 2011; Fredriksson et al 2011; McGaw et al 2012).

By contrast, some executive and administrative nurse leaders had reservations about using punitive disciplinary measures to deter poor IPC practices. These leaders argued that intimidation and fear could lead to staff becoming more prone to making errors. Instead they argued for the adoption of an open culture that offered the opportunity to learn from mistakes, aimed at preventing a recurrence of the problem rather than chastising staff when things go wrong. This perception is compatible with the clinical governance principle that requires organisations to be open about their performance, move away from a blame culture and learn from mistakes and adverse events in order to protect patients (McSherry and Pearce 2010; Berwick Report 2013). However, this could also be viewed as an attempt by managers to divert attention away from their own failure to uphold the ESW operational ring-fencing policy, thus allowing them to escape punitive accountability.

It could be reasoned that the strength of managers' intention to uphold the policy was undermined because of its impact on how their performance would be regarded if they failed to meet demands deemed to be higher priorities at the blunt end. According to Banja (2010), a manager might be aware of the rule or policy violations but still turn a blind eye because efforts to correct the

violations might be perceived as threatening to the achievement of organisational productivity objectives.

This assumption could be applicable to the ESW situation. For instance, ESW administrative leaders and site managers might have considered that correcting the ESW operational policy violations could be more problematic than the adverse consequences that may result from violating that policy. In other words, the implications of not meeting the government imposed A&E waiting time target could be perceived as more disastrous than violating the ESW ring-fencing policy. Furthermore, managers could find themselves in precarious positions if their behaviours are not in line with those at the blunt end of the system.

Nevertheless, it could be argued that breaches of IPC policies that HCWs do not value or disagree with will persist if only soft mechanisms of reinforcing compliance are used. This suggests that it would be prudent for the blunt end to maintain a balance between punitive action and its role as a learning organisation in order to address poor performance among HCWs, not only in the ESW but also in other similar settings. If this is to be achieved, the findings suggest that communication from the top down also needs to be improved.

6.8 Poor dissemination of top-down IPC information

Poor top-down communication was frequently cited by participants to defend their noncompliance with IPC precautions in the ESW and lay the blame with the blunt end. According to De Bono et al (2014), in the absence of a culture of communication within a healthcare organization, staff will lack awareness and proper understanding about infection risks and what they should do to prevent them. Similarly, participants in this study blamed organisational flaws for a failure to clearly communicate expectations to them, which would enable them to understand what they were supposed to do to prevent HCAI.

Poor top-down cascading of information to the grassroots was used as an acceptable reason to justify HCWs' deviant IPC behaviours. According to the participants, this particularly occurred when new policies, practice protocols or IPC products were introduced or when existing ones were updated. For example, cleaning products were changed regularly within the hospital but the employees were often not informed about the changes or provided with the necessary training to help them understand the rationale behind such changes. Some participants expressed frustration about the fact that they felt they were expected to check the internet every single day to make themselves aware of new policies and updates to existing policies and protocols.

Consistent with previous studies, Dixon-Woods et al (2013) found in their study that poor communication of IPC expectations from the top meant that staff were left struggling to know what to do to prevent infection. A similar finding was reported by Efstathiou et al (2011). Their participants argued for timely availability of new information about protective equipment incorporating new instructions and methods to help them stay in line with PPE guidelines, thus avoiding occupational exposure to pathogens. One of their participants interestingly stated: “If I do not know how to use something new or when to use it, how can someone expect me to make use of it?” (Efstathiou et al. 2011:7).

According to De Bono et al (2014), effective dissemination of IPC information empowers participants to believe in their ability to bring about the required change through their behaviour. Therefore, there is a need for those at the blunt end to communicate IPC expectations as well as effectively disseminate IPC messages to those at the sharp end of the system. Frontline participants in the present study reiterated the need for those in authority to ensure that new policies and updates are filtered down to all workers, including the night staff, and to make the information available by using posters and providing education and training. However, it is not only top-down factors that are seen as failings; research indicates that HCWs’ personal beliefs also play an important role.

6.9 Underlying HCWs' beliefs

Jackson et al (2014) suggest that HCWs' behaviours are determined by underlying beliefs that influence their decision-making processes relating to compliance with recommended IPC practices rather than what they are taught to be correct. This was shown to be true in relation to the current study. It was evident that legitimisation of noncompliance with IPC recommendations in the ESW was also rooted in the HCWs' personal beliefs about IPC across the various professional groups. In addition, their perceptions regarding overlapping and competing clinical demands, and how these should be prioritised, further complicate the situation and impede compliance with IPC procedures, as is discussed in the following section.

6.9.1 Perceptions about overlapping /competing clinical priorities

The findings suggest that adoption of IPC precautions is not perceived as important when individuals are confronted with overlapping demands, particularly during emergency situations. Participants in this study, including senior leaders, used words like 'understandable' and 'excusable' to justify their approval of noncompliance with hand hygiene and PPE procedures in such situations. Failing to comply with the standard IPC contact precautions in the event of a cardiac arrest or preventing a fall injury was perceived as acceptable by the participants. The urgent need to eliminate a visible life-

threatening danger to secure immediate safety for the patient seemed to be instinctively prioritised over the requirement to follow IPC practices. In other words, protecting a patient's life from tangible danger was deemed more important than washing hands or wearing gloves to prevent infection. This is a pertinent example whereby individuals defend their rule-breaking behaviour by rationalising it as being done for the good of the patient, as highlighted by Banja (2010).

Furthermore, one participant's view appeared to suggest that donning PPE does not constitute patient care, as shown in the excerpt below:

> "There are occasions like starting chest pumps where, obviously, you have to prioritise and obviously patient care is more important than putting on gloves quickly" [Zoe, Doctor]

As a result, IPC was relegated to a lower priority level and therefore compliance with the recommended standard precautions was often compromised. This finding resonates with a previous study conducted by Macbeth (2002), in which it was observed that poor IPC practice in an ICU, involving practitioners switching off alarms on equipment such as ventilators and infusion pumps while wearing contaminated gloves, went unnoticed and unchallenged. Similarly, some studies revealed that a lack of attention to hand hygiene was deemed to be acceptable by HCWs when an urgent

intervention was needed for a sick patient (Knoll et al 2010; Dixit et al 2013). Moreover, the finding demonstrates the conflict that can occur between the requirement for HCWs to comply with the basic IPC precautions and other competing patient care challenges in the clinical environment. It could be argued that prioritising donning gloves before starting chest pumps on a collapsed patient is putting that person's life at risk.

This shows the complexities faced by HCWs in a contemporary healthcare environment. Furthermore, research conducted by Ward (2012) demonstrates that policies perceived as unrealistic to apply in practice are likely to be ignored by HCWs, especially if they fail to appreciate the complex realities of everyday practice. Equally, some participants in the current study emphasised that hand hygiene policy expectations were extreme, unrealistic and impractical to implement in complicated contextual real-life scenarios of daily clinical practice, even if they were aware of the need to comply. This suggests the need for innovative strategies through further research relating to hand hygiene techniques aimed at reducing the time spent carrying out the procedure to even less than that currently recommended by WHO (2009). Nevertheless, there was also a perception that the risk of cross infection was low, which appeared to be linked to misconceptions about the circumstances that require hand hygiene practices to be followed.

6.9.2 Misconstrued risk perceptions

6.9.2. 1 Contact without physically touching a patient ‘doesn’t count’

The participants perceived that their hands were clean if they had not touched a patient. Furthermore, contact with a patient’s surroundings, for example, touching a glass of water, writing in paper case notes, moving a bedside table, fluffing pillows or assisting a visibly clean patient in and out of bed, did not seem to count as activities with a significant risk of infection transmission. Some doctors did not even see the point of wearing gloves and aprons when entering a single room in which a patient was being barrier nursed for MRSA during a ward round if there was no physical examination involved. This study demonstrates that this is a persistent problem because similar findings have been reported previously by Gralton et al (2013) and Kaur et al (2014), as outlined in the literature review chapter.

It is evident that the risk of cross-transmitting organisms in a small functional unit like the ESW through unwashed but visibly clean hands is often difficult for HCWs to comprehend. HCWs come into contact with invisible pathogens present on inanimate surfaces like door handles, computers, telephones etc., but fail to recognise the inherent potential infection risk. As a result, they end up failing to comply with this important IPC procedure due to lack of

awareness and a false sense of security based on the previously mentioned hand-washing misconceptions.

The literature reveals that correct responses to IPC recommendations by HCWs occur when there is a perceived visible risk (Edwards et al 2012; Jackson et al 2014; Valim et al 2014). For example, a systematic review conducted by Valim et al (2014) revealed that compliance with IPC contact precautions by HCWs was greater only after they had touched potentially contaminated material. This finding is contrary to the findings of the current study whereby consultants were observed removing wound dressings without wearing gloves and not decontaminating their hands afterwards, as reported by the ward-based participants. It is difficult to comprehend how this senior HCW occupational group expected to behave in an exemplary way in the clinical environment when they adopted such poor practices. Perhaps this could be explained by what Banja (2010: 5) describes as “the rules don’t apply to me” belief, held by people who view following the rule in question as unnecessary and may even believe that they are above it. These exemplar excerpts from the current study’s participants demonstrate this point:

> “They [doctors/consultants] think are too high up and, ‘yeah we're gods 'cos we're, - it doesn't matter for us [washing hands] 'cos we're the doctors’, kind of thing..” [Bridget, Physiotherapist, FG2]

> "It happens in some wards where the nurses feel bold to challenge them [doctors/consultants] and they go and do it [wash hands]… but if there is nobody asking them to do it [wash hands] they just think that it's not necessary" [Harry, Physiotherapist, FG3]

6.9.2.1 BBE is 'OTT' (over the top) and lacks scientific evidence

Furthermore, legitimisation of rule-breaking behaviour in relation to hand hygiene policy appears to be underpinned by personal beliefs about the efficacy of BBE standards in reducing infection, especially among doctors. As previously mentioned in the findings chapter, one doctor described this policy as being 'OTT' (over the top) due to a lack of scientific evidence. A perceived difficulty in changing ingrained cultural beliefs held by 'old school' consultants who claimed to have been practising medicine wearing long-sleeved clothing for several years without resultant high infection rates, was highlighted. It was revealed that some 'old school' consultants with ingrained cultural beliefs valued looking smart for their patients and therefore preferred to wear suits. Moreover, they did not see any reason why they should change their clothing culture to comply with BBE in the absence of compelling evidence for its effectiveness.

This finding supports studies carried out by Erasmus et al (2009) and Efstathiou et al (2011) who reported that physicians blamed their noncompliance on the scarcity of evidence-based research to substantiate

the role of hand hygiene in the prevention of HCAI. It would appear that more evidence to demonstrate the efficacy of the BBE policy in the prevention and control of HCAI should continue to be sought, in order to encourage effective compliance with hand hygiene among doctors in the ESW since they are regarded as role models by other professionals. As well as research evidence to reinforce the importance of compliance, the availability of necessary resources also appears to be a key factor that requires addressing, which is explored in the following section.

6.10 The resources needed to comply are not readily available

According to the literature, poor IPC practice is more likely to occur in settings where the physical environment is disruptive, inappropriately organised and inefficient in regard to the availability and accessibility of the resources needed to support compliance by HCWs (Knoll et al 2010; Timen et al 2010; Backman et al 2012; Weigl et al 2012; VanSteelandt et al 2015). In relation to this study, a blunt end systemic failure to provide sufficient essential IPC equipment at the sharp end was repeatedly blamed by many participants as a reason why they breached recommended policies and procedures for hand hygiene, protective clothing, waste management and decontamination of equipment and the environment.

Compliance with IPC contact precautions in the ESW was perceived to be affected by poor access to hand cleansing solutions and waste bins. The inappropriate location of essential resources appeared to create logistical difficulties that disrupted the workflow of HCWs and consequently had a negative impact on their attitude towards compliance as well as their cognitive capability. As revealed by the participants, the fact that the necessary hand hygiene supplies such as alcohol hand rub were not conveniently located within their immediate environment, and dispensers were not always refilled when they became empty, resulted in some individuals forgetting or not bothering to clean their hands. This was especially the case if they got distracted whilst trying to obtain the resources.

Similarly, the inconvenient placement of clinical waste bins in toilets rather than in bays resulted in staff breaching the waste segregation policy by inappropriately discarding gloves in conveniently located non-clinical waste bins. Thus, inconvenient access and unavailability of IPC supplies which were highlighted by the current study as barriers to compliance, concur with several previous studies discussed in the literature review chapter (Morrison and Yardley 2009; Foster et al 2010; Efstathiou et al 2011; Edwards et al 2012; Mazi et al 2013).

Additionally, the participants felt that processes within the organisation were not efficient enough to allow staff to follow policies easily. It was suggested that productivity principles such as ‘Releasing time to care’ and ‘Productive

wards' should be incorporated into IPC processes in order to enable staff to work smartly without having to waste time and effort searching for the necessary supplies to deliver care, thus resulting in greater efficiency. One ward which streamlined equipment storage and labelled items in the store room so that they could be found quickly, was highlighted by the participants as a good example of facilitating processes of care provision for staff.

This perception supports the findings of earlier IPC related studies (Harris et al 2000) which revealed that HCWs preferred interventions that made adherence to hand washing protocols easier in comparison to other initiatives. Easy and convenient access to central venous insertion carts was found to enhance staff compliance with guidelines for inserting central lines in an ICU (Gurses et al 2008). Since then, several researchers have documented similar findings, including Erasmus et al 2009; Nicol et al 2009; Knoll et al 2010; Timen et al 2010; Ward 2011; Backman et al 2012; Edwards et al 2012; McGaw et al; 2012; Mazi et al 2013; and Jackson et al 2014.

Shortage of staff resulting in excessive workloads is another related factor that is frequently blamed for noncompliance, i.e. unsafe practices that involve cutting corners are adopted as a way of coping with the time pressures. This was legitimised as an acceptable reason for noncompliance at the sharp end because of a perception by nurses that managers fail to take into account the increased patient acuity and intensity of work as a result of caring for inappropriately admitted patients with conditions requiring more nurses to

deliver care. Staff admitted to cutting corners in care provision, citing a lack of time to perform procedures correctly in accordance with IPC policies, especially when some nurses were deployed to cover staff shortages in other clinical areas of the hospital. This finding echoes similar frustrations revealed in previous studies which reported HCWs feeling unsupported and demotivated when their concerns about excessive workloads and insufficient staffing are not heeded by management (Healthcare Commission 2006 and 2007; Twigg et al 2011; Francis 2013; Dixon-Woods et al 2013: Bae et al 2015).

Therefore there is a need for managers at the blunt end to ensure sufficient staffing levels so that this reason cannot be used as a defence for engaging in unsafe practices at the sharp end which put patients at risk. The problem of lack of resources is further compounded by a culture of tolerance of noncompliance with IPC procedures among HCWs, as is explored in more detail in the next section.

6. 11 Tolerance of noncompliance is an invisible danger

Rationalising, legitimising and subsequent tolerance of noncompliance with IPC policies by HCWs, whether it is associated with emergency situations or absence of patient contact or even disagreeing with policies, could be attributed to the fact that microorganisms cannot be seen by the naked eye. Consequently, cross infection is not perceived as posing an immediate threat

to life since the danger is not visible. As one participant pointed out, people fail to perceive the importance of complying with IPC precautions because they do not directly see someone dying as a result of not washing their hands. However, it is crucial for authorities to challenge their staff not to normalise poor practices regardless of the nature of the contextual situation or whether the danger is visible to the eye or not. Infection related patient harm may not be evident immediately but it is important for those at the blunt end to make frontline staff appreciate the devastating effect that it can have on a patient and the organisation if the lapses are allowed to escalate into harm. This links with the idea that failure to comply with IPC rules should not only be challenged, but also clearly denounced, as is explained in the following section.

6.12 Condemn tolerance of rule-breaking behaviours to improve practice

Breaking IPC rules under any circumstance should be challenged rather than tolerated. It could be argued that ignoring basic IPC rules at the sharp end, for example, pushing patients into the ESW from the A&E department before a bed space vacated by a patient is cleaned in pursuit of achieving targets at the blunt end, can have adverse consequences in the long term. For example, as previously mentioned, it can mean that staff at the sharp end then cut corners by cleaning the environment and equipment in a rush, which is an unsafe practice. Once that unsafe practice is allowed to continue

unchecked, it can potentially turn into a disaster if the patient acquires an infection or if the ward develops an outbreak. If the outbreak attracts bad publicity from the media, the reputation of the ward and the hospital can be tarnished, leading to loss of public confidence which can be difficult to regain.

In line with recommendations from previous studies, this study reiterates the need for the authorities at the blunt end to maintain a balance between focussing on national mandatory priorities without disregarding IPC requirements locally in the ESW. This can only be achieved if clinical quality and patient safety issues at the sharp end are prioritised at the blunt end.

Furthermore, effective collaboration between managers and clinical staff through better communication, with the patient as the key focus, is needed to thwart the cultural dissonance that impedes sustained compliance with IPC recommended policies and procedures in the ESW. Both sides need to engage with each other and discuss their concerns and differences in an attempt to find an agreement that benefits both parties and ultimately patients. Managers and clinical staff also need to recognise and understand each other's perspectives, particularly in relation to roles, responsibilities, accountabilities etc., and focus on their shared goals rather than their differentials to resolve the issues.

Better communication in a collaborative way between the blunt end and sharp end offers an opportunity for the two parties to debate the issues causing tension which may help clinical staff to understand why managers make the

decisions that they do. In turn, managers also need to understand the impact that overriding the ESW operational ring-fencing policy when there is a bed crisis in the hospital has on clinical practice in the ward. The aim for both managers and clinical staff must be to work together effectively to remove factors that sustain rule and standards violations in the ESW.

However, several participants in this study argued that such factors persist because culturally, the blunt end overlooks IPC related rule-breaking behaviours. If authorities at the blunt end of the system tolerate a culture of noncompliance with IPC policies and procedures, it sends a message to the staff at the sharp end that a noncompliant behaviour is 'OK'. Managers should be sending a message to their staff that patients benefit more if the set standards and procedures are upheld consistently. A strong message should be emphasised from the blunt end that there is no excuse for avoidable harm.

6.13 Chapter summary

The findings suggest that the espoused culture of delivering high quality safe care through ring-fencing the ESW was not being sustained. Noncompliance with IPC policies and procedures was legitimised as acceptable and subsequently tolerated at both the blunt end and sharp end of the organisation underpinning the ESW. Justifications for the noncompliance included the overriding of ESW operational ring-fencing policy by managers

when there was a lack of capacity in the hospital, time pressure, absence of sanctions for poor IPC practice, negative role models, lack of clarity about IPC expectations due to poor communication, and the personal belief system of the practitioner about IPC across the various professional groups. Conclusions and recommendations for practice generated by the study are presented in the next chapter.

CHAPTER 7: CONCLUSION

7.1 Introduction

This chapter aims to draw together themes and issues that have emerged from the study. Furthermore, recommendations derived from the research are offered to improve IPC practice in the ESW and similar clinical settings. It is suggested in the literature that research studies would benefit from adopting behavioural theories and social cognitive models to explore the underlying cultural, social, psychological and emotional processes that may have an impact on HCWs' IPC behaviours (Dyson et al 2011; Edwards et al 2012). To this end, a combination of focus groups and individual interviews underpinned by ethnographic principles was used to investigate the cultural factors that affect multiprofessional HCWs' compliance with IPC recommendations for preventing HCAI in a small functional unit within an acute hospital setting. The sample selected enabled the phenomenon under study to be scrutinised across a range of perspectives from 'board to ward'. A summary of the findings is presented in the next section.

7.2 Summary of the findings

This study identified a culture of inconsistent compliance with IPC policies and procedures by staff working in the ESW. Furthermore, noncompliance with IPC

requirements was legitimised by both frontline and managerial staff. The factors underpinning these justifications for following suboptimal IPC practices were perceived by the participants to include managers overriding the operational ring-fencing policy during bed crises in the hospital, time pressure, overlapping clinical care activities, rapid patient throughput, increased workloads, unavailability and inaccessibility of IPC equipment, lack of sanctions for non-compliers, bad role models, poor top-down dissemination of IPC messages and the personal belief system of each practitioner about IPC. Theoretical perspectives relating to culture in healthcare settings drawn from Banja's (2010) and Dixon-Woods et al's (2013) research were used as lenses through which to integrate new insights from the findings of this study into the existing IPC body of knowledge.

Noncompliance with IPC policies and procedures for preventing HCAI at the sharp end seemed to occur most often when the routine care environment was altered by blunt end related factors, such as rapid patient throughput from A & E and increased patient acuity resulting from inappropriate admission of medical outliers and infected patients into the ESW. In turn, HCWs found themselves faced with excessive workloads compounded by competing clinical care priorities and insufficient staffing levels. There was also a perception among the participants that the blunt end tolerated negative role models and lacked robust measures for holding non-compliers to account, thereby allowing noncompliance to become insidious. Systemic failures to provide sufficient, easily accessible IPC equipment such as aprons, gloves and clinical waste bins in convenient locations, and to disseminate important IPC messages effectively from the top down to the grassroots level were repeatedly cited and blamed as a barrier to compliance with recommended policies. HCWs' personal beliefs also played an

important role in legitimising noncompliant behaviours. For example, noncompliance with hand hygiene precautions related to emergency situations, the absence of physical contact with a patient and disagreement with IPC policy was rationalised as acceptable by the HCWs.

However, successful provision of high quality safe care for elective surgical patients through ring-fencing of the ESW depends on the identified themes in this study being reversed. Whilst these issues remain, it is argued that the policy of ring-fencing the ESW to suppress the risk of HCAI acquisition to elective patients is unsustainable and ineffective. According to Banja (2010) such violations are not usually sufficient to cause immediate harm but this should not excuse complacency, because when they are allowed to continue unchecked over time they can have disastrous outcomes if ignored by the blunt end. Therefore, this study seeks to remind authorities at the blunt end not to ignore factors that support and legitimise noncompliance with recommended IPC precautions that allow it to become normalised, because ultimately doing so can pose serious risks to patients. Managerial staff at the blunt end should reiterate to all grades of staff across all levels that noncompliance with IPC rules, regardless of origin, cause or circumstance, will not be tolerated.

7.3 Limitations, strengths and implications for future research

It is acknowledged that this study has some limitations; hence, caution is advised when interpreting its findings. First, owing to the criticisms of the qualitative design mentioned in the Methodology section, it would be impossible to generalise its findings to the wider population of HCWs since the study focused on one specific ward in a single hospital. Additionally, this study is not immune from the well-documented biases associated with the use of focus groups and individual interviews underpinned by ethnographic principles (Hammersley and Atkinson 2007). Whilst these biases can never be completely eliminated, as pointed out in the literature, the goal of this study in this regard was to identify their sources and minimise their impact on the findings.

As documented in the Methodology chapter, reflexivity (Berger 2015) was used to try to address researcher biases and to enable readers to draw their own conclusions. However, exploring factors that affect HCWs' adoption of recommended IPC behaviours within their contextual working environments using a quantitative approach with standardised questionnaires inevitably entails both difficulties and limitations. The open-ended interview questions and narratives of the participants allowed in-depth understanding of the cultural issues that affect staff compliance with IPC requirements in a small functional unit of a busy acute hospital, thus fulfilling the aim of this study. Although generalisability was compromised, the themes identified may be

applicable to HCWs working in settings and environmental contexts that are similar to the ESW. Moreover, this transferability of findings that are consistent with the previous studies reviewed is considered to constitute an important strength of this study.

Second, as a novice researcher in full-time employment undertaking this study for the fulfilment of a part time doctoral degree, participant observation was not carried out as it would have been impractical to invest the necessary prolonged time period in a meaningful way to obtain credible data. It is believed that conducting observations might have corroborated the frontline participants' interview data, thus strengthening the findings further. However, the potential for people to alter their behaviour favourably when they are conscious of being watched was also acknowledged. In addition, the decision to use semi-structured open-ended questions rather than unstructured interview techniques was made to enable me, as the moderator, to keep the interviewees focussed on the topic and to maintain a balance between dominant and passive participants, especially in focus groups. It seems reasonable to assume that some of the factors linked to noncompliance among HCWs might have been different if they had been allowed to emerge freely from the participants without the constraint of an interview guide. As it was not feasible to commit the necessary time required to minimise the potential 'Hawthorne effect' in relation to this study, it may be worthwhile for future researchers to consider conducting observation studies that allow prolonged periods of field work in similar settings, guided by the cultural IPC compliance issues identified in the present research. It may also be

beneficial to explore this topic using unstructured interviews that do not inhibit the free flow of ideas from participants.

Third, the original intention of the data collection plan was for resident doctors to participate in multiprofessional focus groups. However, their work schedules made it impossible. Thus, it is speculated that if resident doctors had been able to participate in focus groups, the opportunities afforded by this method for debate, exchange of ideas, agreement and disagreement with professionals from other disciplines with whom they interacted on a daily basis in the ESW, may have produced more diverse data than those yielded by individual interviews. However, it is acknowledged that this may be a naïve assumption since the quality and richness of data generated by this strategy is dependent on the group dynamics, skills of the moderator and the honesty of the views shared by the participants. Nevertheless, the difficulty in recruiting medical participants encountered by this study confirms similar experiences documented by other researchers (Erasmus et al 2009; Flanegan et al 2011).

Fourth, the selection criteria for the study participants excluded HCWs from other disciplines such as pharmacists, porters, radiographers, housekeepers, ward clerks and many more who are indirectly involved with patient care provision. It is possible that this exclusion could have caused invaluable data contributing to the identification of inhibitors and facilitators of compliance with IPC recommendations in this setting to be missed. Therefore, it is advised that future IPC-related research in contextual settings should seek the views

of members of those disciplines who, although they might not be delivering direct ‘hands on’ care, nonetheless have interactions with patients. After all, the Health and Social Care Act 2008 DH (2015) states that compliance with IPC recommendations is every HCW’s responsibility, added to which, there is considerable fluidity regarding professional roles in contemporary healthcare delivery and they appear to be continually changing.

Fifth, the study took place during an unexpected reconfiguration of surgical wards in the hospital that constituted the research setting. It is possible that the clinical participants’ views about a perceived lack of control over compliance with IPC requirements which blamed organisational management-related inhibitors could have been influenced by their frustration and dissatisfaction with the changes imposed on them by the service re-design.

Sixth, it was difficult to locate previous research studies investigating cultural issues relating to staff compliance with IPC requirements which specifically focussed on a ring-fenced small functional unit combining orthopaedic and general surgery specialties in an acute hospital. Consequently, research papers from other disciplines that examined the subject of compliance were reviewed to gain access to theoretical insights and frameworks that could be adapted and applied to this study, thereby expanding the IPC body of knowledge. The current study appears to be the first to qualitatively explore cultural factors affecting compliance with IPC requirements in a ring-fenced

elective surgical ward to interpret and draw conclusions from the data obtained from multiprofessional frontline and managerial staff in their natural setting. Filling this gap in the body of existing IPC knowledge is regarded as another strength and significant achievement of this study. The following recommendations are offered to promote consistent compliance with IPC recommendations in similar healthcare settings.

7.4 Recommendations

Recommendation 1

There is a need for a debate about whether or not it is sustainable to continue following a ring-fencing policy, taking into account the macro and micro demands exacerbated by resource constraints which result in it being regularly violated and the frustration caused to staff when their attempts to enforce the policy are undermined, as highlighted by the participants in this study. Although it is considered best practice by expert opinion and consensus, there is still no hard scientific evidence to substantiate the claim that ring-fencing alone reduces infection rates in elective surgical and orthopaedic patients. A study by Whitehouse et al (2008) investigating cancellation of elective work associated with bed crises in their organisation appears to suggest that the ring-fencing strategy worked when their elective surgical unit was physically removed to a separate geographical location

away from the main busy acute hospital. Thus, this may be an avenue worth exploring in pursuit of successful implementation of the ring-fencing strategy to combat HCAI in today's complex and challenging healthcare environment.

Recommendation 2

There is a need for the organisation to create a culture in which noncompliance of any nature at any level with IPC recommendations is considered unacceptable from the highest level of management to the grassroots, as suggested by the participants in the current study. In addition, the dichotomy of views among the participants in the current study regarding ways to tackle poor IPC practice suggests a need for a strategy that combines sanctions and learning from the outcomes of adverse events at both ward and organisational levels. As pointed out by Whitby et al (2007), sanctions could focus on noncompliance associated with individuals' intentional wrongdoing, whilst unintentional instances of noncompliance by individuals resulting from management system failures could be addressed by support and learning from resultant adverse events.

A clear message from the blunt end needs to be disseminated to all staff, regardless of their professional status within the hierarchy, that individuals will be held to account if they fail to follow the recommended IPC policies for preventing HCAI, unless they are able to defend their actions, for example, in

extreme life-threatening situations. It is imperative that the same rules are applied to everyone from the most senior to the most junior member of staff in the organisation. As Jenner et al (2002) point out, a lax culture allows unethical behaviour to flourish while poor practice become accepted as the norm.

Recommendation 3

It is recommended that hospital managers should acknowledge organisational and environmental contextual issues and situations beyond the control of individual staff that make compliance with IPC precautions difficult. Managers are encouraged to realise that expecting HCWs to rigorously adopt contact IPC standard precautions consistently in a context of heavy workloads and high patient acuity, including other competing clinical and organisational demands, may be unrealistic and could also be used as an excuse for sloppy behaviours. Consistent with previous studies, the working environment in an acute hospital clinical setting poses complex competing demands that have an impact on employees' time and cognitive capacities (Timen et al 2010; Edwards et al 2012). In addition, ongoing effective communication and close collaboration between managerial and clinical staff is likely to be helpful in order to strike a balance between meeting nationally driven priorities like achieving targets without compromising the safety and quality of clinical patient outcomes at local level.

Recommendation 4

There is a need to encourage senior staff to model positive IPC behaviours to junior staff in order to promote optimal staff compliance with IPC precautions. Furthermore, engaging consultants by encouraging them to demonstrate exemplary behaviours, especially hand hygiene and use of PPE, may promote compliance since they are perceived as role models by junior doctors and HCWs from other disciplines in the ESW. However, in order to achieve this, high quality evidence is needed to convince them of the efficacy of the recommended interventions in reducing HCAI, especially BBE. This is an area of further research which has also been recommended in previous studies (Erasmus et al 2009; Efstathiou et al 2011; Edwards et al 2012).

Recommendation 5

There is a need to ensure that appropriate resources required by HCWs to do their jobs properly in terms of adequate staffing levels, necessary equipment and sufficient time to improve staff compliance with IPC precautions are available. To facilitate this, IPC processes and procedures should be streamlined and simplified so that they are easy for HCWs to follow and adopt. Thus, redesigning the physical environment to ensure that HCWs have quick and easy access to sufficient essential IPC equipment and other supplies that they need at their disposal in a timely fashion may be necessary to facilitate compliance. In line with previous studies (Efstathiou et al 2011; Edwards et al 2012), participants in the current study recommended that

ensuring easy access to IPC resources like hand soaps, rubs, hand drying towels, waste bins, gloves, aprons etc. at the point of care may help to overcome time constraints and promote efficient working in the clinical setting. The need to replenish empty wall-mounted dispensers and the provision of individual units on every bed was highlighted to ensure the availability of alcohol hand sanitiser at all times. Furthermore, the participants believed that convenient access to hand disinfectants encourages staff to clean their hands in between patients at the point of care. They also recommended that hand moisturiser dispensers should be made more readily available in the clinical environment to prevent hand dryness. Adequate staffing levels that correspond with workload intensity and patient acuity may enable staff to adopt IPC precautions without feeling rushed.

Recommendation 6

There is a need to improve the top down communication and dissemination of IPC messages by making sure that all staff, including those working night shifts, are made aware of changes in IPC policies and resources, for example, when new cleaning products are introduced. Additionally, communication through effective training and educational programmes is necessary to tackle the misconception held by many individuals that washing hands is not necessary after performing tasks where a patient is not touched, such as fluffing pillows or handling paper case notes.

7.5 Conclusion

Despite the study's limitations, it can be seen that the perceptions of the various participants reflect and support the findings from the existing literature regarding compliance with recommended IPC practices. This thesis has shown that compliance with IPC requirements in a ring-fenced functional unit of a busy, complex acute hospital setting is influenced by cultural factors, both at micro and macro levels of the system, as well as staff beliefs. Given that hospital managers have a responsibility to ensure that all patients who need care receive it safely on an equal basis, it seems that ring-fencing beds for one particular group of patients at the expense of others creates a paradox that poses an ethical dilemma for the overall delivery of patient care and service provision in an acute hospital setting.

As demonstrated by the views of the participants in this study, on one hand, when there is a bed crisis in the hospital, admitting trauma and medical patients into available empty beds in the ESW breaches the ring-fencing policy. On the other hand, the alternative is to leave other sick patients who do not meet the ring-fencing criteria on trolleys in the A&E department, which would be morally unacceptable. However, this should not be used as an excuse to legitimise resultant unsafe practices. Nevertheless, it seems reasonable to assume that, as people live longer due to advances in medicine and technology, the demand for trauma and medical emergency beds is going to increase in the future, rendering the ring-fencing of any bed

unsustainable. Hence, it appears that the ring-fencing strategy is no longer feasible against a backdrop of increasing complexities and conflicting demands inherent in an acute clinical hospital setting, compounded by constraints on resources.

Additionally, implementing a ring-fencing policy seems to give staff false expectations and, when these are not met, frustration and demoralisation may result, as demonstrated by the views of the various clinical and managerial participants in this study. Thus, there is a need for a debate to consider the future implications of following a ring-fencing policy in light of the paradox raised by this study, and specifically the question of whether or not the policy should continue if it is unsustainable in contemporary healthcare, as this research suggests. As one of the participants pointed out: what is the point of having the ring-fencing policy in the ESW if it cannot be upheld? It is hoped that the findings of this study will point the way towards future debate and research into healthcare service provision and delivery strategies that involve ring-fencing beds for a particular group of patients, taking into account the complex cultural and contextual factors that operate in acute care hospitals.

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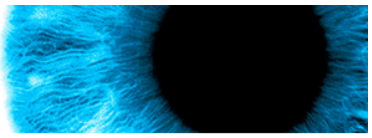
Appendix 1: Database search example

NICE Healthcare Databases Advanced Search



Select Database | Saved Searches | Search | Recover Searches | Alerts | My OpenAthens Account

Home » Database select » Search and Limits » Search results

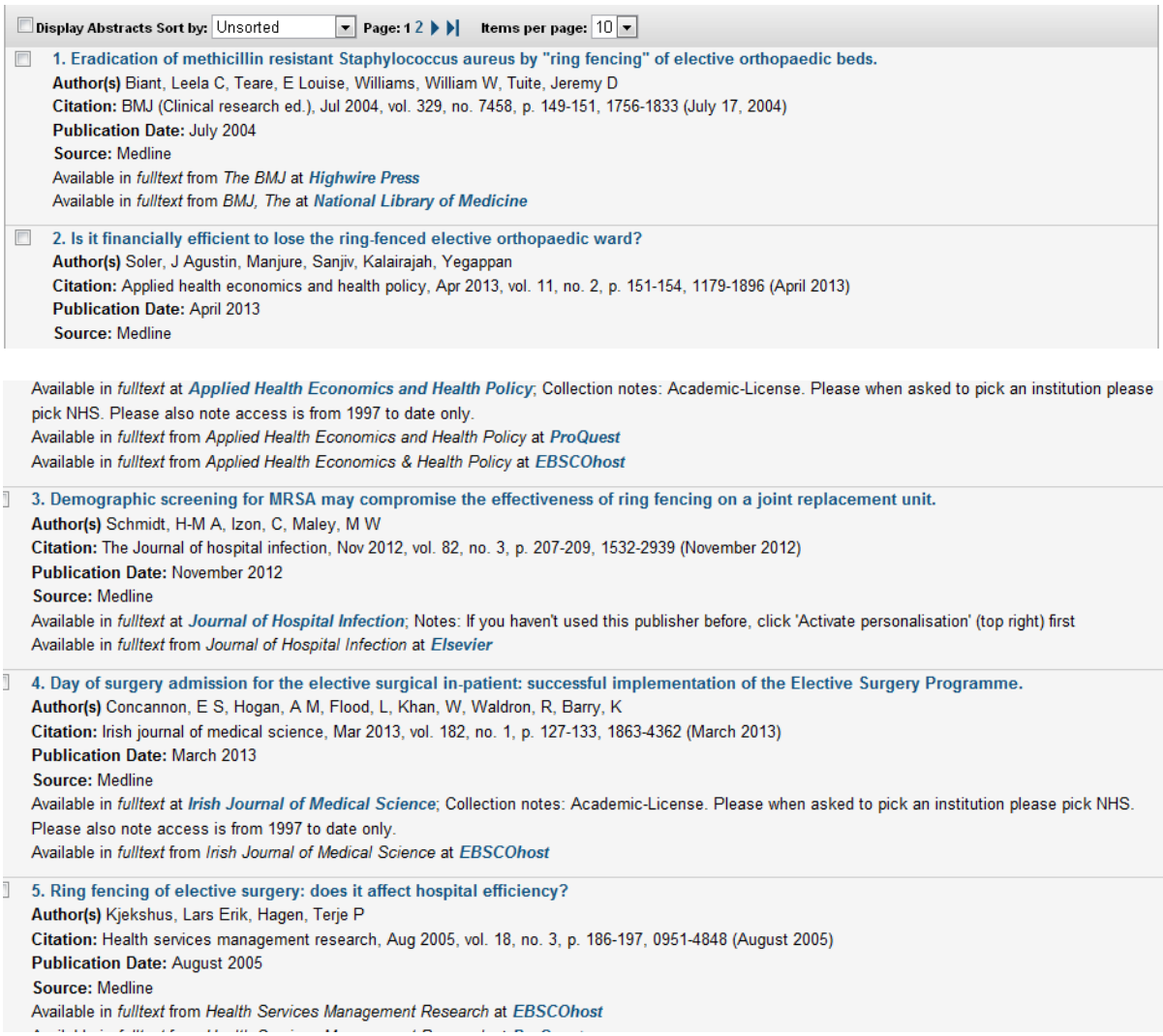
Search history

Select All | Save all | Save selected lines | Delete selected | Remove duplicates | ? | Collapse history ▲

	Line	Database	Search Term	View Results	
☐	1	CINAHL	("cultural issue$ " OR "cultural factor$" OR "culture$").ti,ab	26139	Apply Limits
☐	2	CINAHL	("staff" OR "healthcare worker$" OR "health care worker$" OR "health professional$" OR "health care personnel" OR "healthcare personnel" OR "health personnel" OR "allied health professional$" OR "nurse$" OR "clinician$" OR "consultant$" OR "therapist$" OR "occupational therapist$" OR "physiotherapist$" OR "doctor$").ti,ab	174399	Apply Limits
☐	3	CINAHL	("compliance" OR "adherence" OR "adoption$" OR "behaviour$" OR "behavior$").ti,ab	98242	Apply Limits
☐	4	CINAHL	("infection control" OR "infection prevention" OR "infection control practice$" OR "universal precaution$" OR "infection control measure$" OR "contact precaution$" AND "standard precaution$" OR "hospital acquired infection$" OR "healthcare associated infection$" OR "health-care associated infection$").ti,ab	8940	Apply Limits
☐	5	CINAHL	("ring-fenced" OR "ringfenced" OR "ring-fencing" OR "ring fencing" OR "ringfencing").ti,ab	70	Apply Limits
☐	6	CINAHL	("elective surgical ward$" OR "elective orthopaedic ward$" OR "acute setting$" OR "hospital$" OR "healthcare setting$" OR "clinical setting$").ti,ab	139726	Apply Limits
☐	7	CINAHL	1 AND 2 AND 3 AND 4 AND 5 AND 6	0	Apply Limits
☐	8	CINAHL	2 AND 3 AND 4 AND 5 AND 6	0	Apply Limits
☐	9	CINAHL	2 AND 3 AND 4 AND 6	174	Apply Limits
☐	10	CINAHL	5 AND 6	10	Apply Limits
☐	11	Medline	1 AND 2 AND 3 AND 4 AND 5 AND 6	0	Apply Limits
☐	12	Medline	2 AND 3 AND 4 AND 5 AND 6	0	Apply Limits
☐	13	Medline	2 AND 3 AND 4 AND 6	330	Apply Limits
☐	14	Medline	5 AND 6	20	Apply Limits
☐	15	BNI	1 AND 2 AND 3 AND 4 AND 5 AND 6	0	Apply Limits
☐	16	BNI	2 AND 3 AND 4 AND 5 AND 6	0	Apply Limits
☐	17	BNI	2 AND 3 AND 4 AND 6	5	Apply Limits
☐	18	BNI	5 AND 6	1	Apply Limits

Combine selected ◉ AND ○ OR To combine two line numbers using NOT, enter the line numbers in the search box below: for example 1 NOT 2

20 Search results for "5 AND 6" in Medline



Display Abstracts Sort by: Unsorted Page: 1 2 Items per page: 10

1. Eradication of methicillin resistant Staphylococcus aureus by "ring fencing" of elective orthopaedic beds.
Author(s) Biant, Leela C, Teare, E Louise, Williams, William W, Tuite, Jeremy D
Citation: BMJ (Clinical research ed.), Jul 2004, vol. 329, no. 7458, p. 149-151, 1756-1833 (July 17, 2004)
Publication Date: July 2004
Source: Medline
Available in *fulltext* from *The BMJ* at ***Highwire Press***
Available in *fulltext* from *BMJ, The* at ***National Library of Medicine***

2. Is it financially efficient to lose the ring-fenced elective orthopaedic ward?
Author(s) Soler, J Agustin, Manjure, Sanjiv, Kalairajah, Yegappan
Citation: Applied health economics and health policy, Apr 2013, vol. 11, no. 2, p. 151-154, 1179-1896 (April 2013)
Publication Date: April 2013
Source: Medline
Available in *fulltext* at ***Applied Health Economics and Health Policy***; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.
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3. Demographic screening for MRSA may compromise the effectiveness of ring fencing on a joint replacement unit.
Author(s) Schmidt, H-M A, Izon, C, Maley, M W
Citation: The Journal of hospital infection, Nov 2012, vol. 82, no. 3, p. 207-209, 1532-2939 (November 2012)
Publication Date: November 2012
Source: Medline
Available in *fulltext* at ***Journal of Hospital Infection***; Notes: If you haven't used this publisher before, click 'Activate personalisation' (top right) first
Available in *fulltext* from *Journal of Hospital Infection* at ***Elsevier***

4. Day of surgery admission for the elective surgical in-patient: successful implementation of the Elective Surgery Programme.
Author(s) Concannon, E S, Hogan, A M, Flood, L, Khan, W, Waldron, R, Barry, K
Citation: Irish journal of medical science, Mar 2013, vol. 182, no. 1, p. 127-133, 1863-4362 (March 2013)
Publication Date: March 2013
Source: Medline
Available in *fulltext* at ***Irish Journal of Medical Science***; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.
Available in *fulltext* from *Irish Journal of Medical Science* at ***EBSCOhost***

5. Ring fencing of elective surgery: does it affect hospital efficiency?
Author(s) Kjekshus, Lars Erik, Hagen, Terje P
Citation: Health services management research, Aug 2005, vol. 18, no. 3, p. 186-197, 0951-4848 (August 2005)
Publication Date: August 2005
Source: Medline
Available in *fulltext* from *Health Services Management Research* at ***EBSCOhost***

Appendix: 2 Participants' invitation letter

Dear…….. Date……..

My name is Tana Makoni, Infection Prevention and Control Nurse Specialist and I am currently a doctoral student at the University of Essex sponsored by the Trust. I am conducting a research study in which I am inviting you to participate. The study explores the influence of culture on staff compliance with the standard precautions for the prevention and control of infection in an acute hospital Elective Surgical Ward (ESW). The purpose of the research is to understand why health care workers (HCWs) comply or fail to consistently comply with evidence based policies, guidelines and protocols designed to prevent and control healthcare associated infection (HCAI). It is anticipated that the findings will be used to develop more effective interventions and environments that facilitate HCWs' compliance with the standard precautions for preventing HCAI, thus, improving the safety of patients, staff and the public including the quality of healthcare.

I also enclosed a 'Participant information sheet' to help you make an informed decision whether you would like to take part in this study or not. Please use the supplied envelope to inform me of your decision by……..(date).

Thank you and I look forward to hear from you in due course.

.Kind regards,

Tana Makoni

Contact details

Telephone: XXXX

Email: tana.makoni@XXXXX...

Appendix: 3a Focus group participants' information sheet

Study title

Exploring the influence of culture on staff compliance with the standard precautions for the prevention and control of infection in an acute hospital Elective Surgical Ward (ESW)

Invitation to a research study

You are invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. You may talk to others about the study if you wish.

What is the purpose of the study?

The purpose of the research is to understand why health care workers (HCWs) comply or fail to consistently comply with evidence based policies, guidelines and protocols designed to prevent and control healthcare associated infection (HCAI). The main objective is to identify factors that impede and facilitate healthcare workers' compliance with infection prevention and control measures from a cultural perspective.

Why have I been invited?

Participants for this study have been chosen based on the assumption that a variety of professionals working together in an acute hospital ESW will have something to say about their experience, perceptions, knowledge and behaviour regarding compliance with standard precautions for the prevention and control of infection in their everyday cultural environment.

Do I have to take part?

Taking part in the research is entirely voluntary. It is up to you to decide. I will go through this information sheet and answer any questions that you may have before the group discussion starts.

What will happen to me if I take part?

If you choose to participate, after reading the information sheet, you will be asked to sign a consent form to confirm that you have agreed to take part in the research. You will be asked to attend a focus group discussion comprising of 4 to 10 people, lasting approximately 1.5 hours. Discussions will be audio-taped so that I can accurately reflect on what is discussed. An observer will also be in attendance to take notes and record non verbal communication among the participants. The focus group will contain nurses, physiotherapists and occupational therapists at all professional levels, as these are key occupational groups involved in direct patient care in a multidisciplinary team. You will be informed of the venue accordingly once arranged by email, telephone or letter.

What are the possible disadvantages and risks of taking part?

Although there appears to be no evident significant discomforts, the inconvenience of participating in this research is your time. However, I would also like to advise you that as a nurse researcher, I am obliged to inform the person to whom you are accountable of any information disclosed that would place patients, staff and others at risk of harm, in accordance with the research ethics guidelines.

What are the possible benefits of taking part?

Participating in the study will give you the opportunity to express your views and experiences about infection prevention and control practice in your daily environment. It is anticipated that the findings will inform managers and their staff more successful ways to overcome barriers that impede the adoption of standard precautions and develop more effective interventions and environments that promote best practice in preventing HCAI.

Will my taking part be confidential?

Your name will not appear in any of the papers on which information will be recorded. No details of your identity will be used when the findings are reported. The observer taking notes will maintain confidentiality at all times. All the participants will be asked to respect each others' views and advised not to discuss any issues outside the session to anyone outside the group.

However, I would like to make you aware that full anonymity cannot be guaranteed when taking part in a focus group; being in a group with other people, there is a risk that others may not keep what you say confidential.

What will happen to the information that I give?

The data will be stored securely in locked cabinets, password protected computers and encrypted memory stick, in line with the Data Protection Act and Caldicott Principles. The tapes will be destroyed once data analysis is completed. The information that you give may be shared anonymously with my research supervisors and peer reviewers.

What will happen if I don't want to carry on with the study?

You are free to withdraw at any time if you wish, without giving a reason. Any information that you give prior to leaving the group may be included in the research findings.

What will happen to the results of the research study?

The results of the study will be used in my doctoral thesis and presented to academic and professional conferences. Findings will also be disseminated to all levels of staff including the research participants, policy makers, managers and educators through presentations to various committees, directorates, multidisciplinary teams, Trust Board and education forums. Dissemination to a wider audience through journal publication will be considered and you will be welcome to see a copy of the report prior to publication.

Who is organising and funding the research?

This study is part of a Professional Doctorate in Health Service Management that I am currently undertaking at the University of Essex sponsored by the Trust.

Who has reviewed the study?

This study has been reviewed and given a favourable ethical opinion by the Essex 2 Research Ethics Committee. It has also been reviewed by Research and Development Committees for XXX Hospital NHS Foundation Trust and the University of Essex. The study proposal has been peer-reviewed by an

independent academic Infection Prevention and Control Expert from the UK Infection Prevention Society.

Contact Information

If you would like further information about the study please do not hesitate to contact me on Telephone: XXXX Extension XXX, Bleep: XXX Email: Tana.Makoni@XXX

My academic supervisor's contact details are:

Dr XXX, Head of School, Department of Health and Human Sciences, University of Essex, Wivenhoe Park, Colchester CO4 3SQ

Telephone xxxxx Email xxx@essex.ac.uk

Appendix: 3b Research information sheet for organisational leaders and doctors

Study title

Title of project: Exploring the influence of culture on staff compliance with the standard precautions for the prevention and control of infection in an acute hospital Elective Surgical Ward

Invitation to a research study

You are invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. You may talk to others about the study if you wish.

What is the purpose of the study?

The purpose of the research is to understand why health care workers (HCWs) comply or fail to consistently comply with evidence based policies, guidelines and protocols designed to prevent and control healthcare associated infection (HCAI). The main objective is to identify factors that impede and facilitate healthcare workers' compliance with infection prevention and control measures from a cultural perspective.

Why have I been invited?

You have been chosen to participate because of your role as an organisational leader since the research seeks to explore the influence of culture on infection prevention and control within an acute hospital setting involving multiprofessional staff from the ward to board level.

Do I have to take part?

Taking part in the research is entirely voluntary. It is up to you to decide. I will go through this information sheet and answer any questions that you may have before the interview session starts.

What will happen to me if I take part?

If you choose to participate after reading this information sheet, you will be asked to sign a consent form to confirm that you have agreed to take part in

the research. The interview session will last between 30 and 45 minutes. The discussion will be audio-taped so that I can accurately reflect on what is discussed.

What are the possible disadvantages and risks of taking part?

Although there appears to be no evident significant discomforts, the inconvenience of participating in this research is your time. However, I would also like to advise you that as a nurse researcher, I am obliged to inform the person to whom you are accountable of any information disclosed that would place patients, staff and others at risk of harm, in accordance with the research ethics guidelines.

What are the possible benefits of taking part?

It is anticipated that the findings will inform managers and their staff more successful ways to overcome barriers that impede the adoption of standard precautions and develop more effective interventions and environments that promote best practice in preventing HCAI.

Will my taking part be confidential?

What you say in the interview will be confidential. Your name will not appear in any of the papers on which information will be recorded. Anonymity will be used when the findings are reported.

What will happen to the information that I give?

The data will be stored securely in locked cabinet, password protected computers and encrypted memory stick in line with the Data Protection Act and Caldicott Principles. The tapes will be destroyed once data analysis is completed. The information you give may also be shared with my research supervisors and peer reviewers anonymously.

What will happen if I don't want to carry on with the study?

You are free to withdraw at any time if you wish, without giving a reason. However, any information that you give prior to withdrawing from the study may be included in the research report.

What will happen to the results of the research study?

The results of the study will be used in my doctoral thesis and presented to academic and professional conferences. If requested, findings will also be disseminated to all levels of staff including the participants, policy makers, managers and educators through presentations to various committees, directorates, multidisciplinary teams, Trust Board and education forums. Dissemination to a wider audience through journal publication will be considered and you will be welcome to see a copy of the report prior to publication.

Who is organising and funding the research?

This study is part of a Professional Doctorate in Health Service Management that I am currently undertaking at the University of Essex sponsored by the Trust.

Who has reviewed the study?

This study has been reviewed and approved by the Essex 2 Research Ethics Committee, XXXX University Hospital NHS Foundation Trust Research and Development Group and the University of Essex. The study proposal has also been peer-reviewed by an independent academic Infection Prevention and Control Expert from the UK Infection Prevention Society.

Contact Information

If you would like further information about the study please do not hesitate to contact me on Telephone: XXXX Extension XXX Bleep: XXXX

Email: Tana.Makoni@XXXX.nhs.uk

My academic supervisor's contact details are:

Dr XXXX, Head of School, Department of Health and Human Sciences, University of Essex, Wivenhoe Park, Colchester CO4 3SQ

Telephone XXXX Email XXXX@essex.ac.uk

Thank you for considering participating in this study.

Appendix 4: Focus group and medical staff interview guide

What are your thoughts about staff compliance with recommended policies, guidelines, protocols and practice designed to prevent HCAI?

What factors do you think influence staff to comply with the recommended standard precautions for preventing and controlling HCAI in every day practice?

What factors or barriers do you think impede staff from complying with the recommended standard precautions for preventing and controlling HCAI in every day practice?

How can sustained staff compliance be improved to ensure a safe environment for patients, staff and visitors?

What other thoughts or comments have you got relating to staff compliance with the standard precautions for preventing HCAI in your unit which have not been discussed in this session?

Appendix 5: One to one interview guide for organisational leaders

What are your thoughts about staff compliance with recommended policies, guidelines, protocols and practice designed to prevent HCAI?

What organisational factors determine the failure to implement safe infection prevention and control practices within an acute hospital setting?

What organisational factors determine the success of implementing safe infection prevention and control practices within an acute hospital setting?

How can consistent staff compliance be improved to ensure a safe environment for patients, staff and visitors?

Do you have any more comments on this subject?

Appendix 6: Consent form

Title of project: Exploring the influence of culture on staff compliance with the standard precautions for the prevention and control of infection in an acute hospital Elective Surgical Ward

Name of researcher: Tana Makoni **Please initial box**

1	I confirm that I have read and understood the information sheet dated…**23/02/11**…….. (**Version…3**……..)	☐
2	I understand that my participation is voluntary and I am free to withdraw at any time without giving a reason.	☐
3	I understand that my participation will remain anonymous in this project.	☐
4	I understand that the researcher is obliged to inform the person to whom I am accountable of any information that I disclose that could cause harm to patients, staff and others, in line with research ethics guidance but maintaining confidentiality.	☐
5	I agree to take part in the above study.	☐
6	I give consent for the interview to be audio-taped.	☐

Name of participant……

Date…….. Signature…….

Name of person obtaining consent……

Date……Signature……

Appendix 7 Ethical Approval Documentation

NHS
National Research Ethics Service
Essex 2 Research Ethics Committee
Terminus House
9th Floor
The High
Harlow
Essex
CM20 1XA

Telephone: 01279 419312
Facsimile: 01279 419246

29 December 2009

Miss Axilia Tanakasei (Tana) Makoni
Infection Prevention and Control Nurse Specialist
als NHS Foundation Trust
, Microbiology Department

Dear Miss Makoni

Study Title:	**Exploring the influence of culture on staff compliance with the standard precautions for the prevention and control of infection in an acute hospital Joint Replacement Unit (JRU)**
REC reference number:	**09/H0302/102**
Protocol number:	**1**

Thank you for your letter of 09 December 2009, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair in consultation with the lead readers for your study.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

The Committee has not yet been notified of the outcome of any site-specific assessment (SSA) for the non-NHS research site(s) taking part in this study. The favourable opinion does not therefore apply to any non-NHS site at present. I will write to you again as soon as one Research Ethics Committee has notified the outcome of a SSA. In the meantime no study procedures should be initiated at non-NHS sites.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of

the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk. *Where the only involvement of the NHS organisation is as a Participant Identification Centre, management permission for research is not required but the R&D office should be notified of the study. Guidance should be sought from the R&D office where necessary.*

Sponsors are not required to notify the Committee of approvals from host organisations.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Covering Letter		27 August 2009
REC application		24 August 2009
Protocol	1	15 August 2009
Investigator CV		15 August 2009
Letter of invitation to participant	1	15 August 2009
Letter from Sponsor		24 August 2009
Referees or other scientific critique report		28 July 2009
Summary/Synopsis	1	15 August 2009
Interview Schedules/Topic Guides	1 Focus group	15 August 2009
Interview schedules or topic guides for participants - individual interviews	1	15 August 2009
Supervisors CV		10 June 2009
CV for trust/clinical supervisor		02 June 2009
Participant Information Sheet: Focus Group	Version 2.0	09 December 2009
Participant Information Sheet: Organisational/Clinical Leaders	Version 2.0	09 December 2009
Participant Consent Form: Focus Group	Version 2.0	09 December 2009
Participant Consent Form: Organisational/Clinical Leaders	Version 2.0	09 December 2009
Response to Request for Further Information		09 December 2009

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research

NHS
National Research Ethics Service
Essex 2 Research Ethics Committee

East of England Rec Office 1
Victoria House
Capital Park
Fulbourn
Cambridge
CB21 5XB

Tel: 01223 597693
Fax: 01223 597645

17 March 2011

Miss Axilia Tanakasei (Tana) Makoni
Infection Prevention and Control Nurse Specialist

Dear Miss Makoni

Study title:	**Exploring the influence of culture on staff compliance with the standard precautions for the prevention and control of infection in an acute hospital Joint Replacement Unit (JRU)**
REC reference:	**09/H0302/102**
Amendment number:	**AM 01**
Amendment date:	**23 February 2011**

The above amendment was reviewed by the Sub-Committee in correspondence.

Ethical opinion
The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents
The documents reviewed and approved at the meeting were:

Document	Version	Date
Interview Schedules/Topic Guides	AM 01 Version 2.0	23 February 2011
Letter of invitation to participant	AM 01 Version 2.0	23 February 2011
Participant Consent Form: Organisational/Clinical Leaders and Medical Staff	AM 01 Version 3.0	23 February 2011
Participant Consent Form: Focus Groups	AM 01 Version 3.0	23 February 2011
Participant Information Sheet: Organisational/Clinical Leaders	AM 01 Version 3.0	23 February 2011
Participant Information Sheet: Medical Staff	AM 01 Version 1.0	23 February 2011
Participant Information Sheet: Focus Groups	AM 01 Version 3.0	23 February 2011
Protocol	AM 01 Version 2.0	23 February 2011
Notice of Substantial Amendment (non-CTIMPs)	AM 01	23 February 2011
Covering Letter	AM 01	23 February 2011

NHS
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Tel: 01223 597693
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28 February 2011

Miss Axilia Tanakasei (Tana) Makoni
Infection Prevention and Control Nurse Specialist
S Foundation Trust
›biology Department

Study title:	**Exploring the influence of culture on staff compliance with the standard precautions for the prevention and control of infection in an acute hospital Joint Replacement Unit (JRU)**
REC reference:	**09/H0302/102**
Amendment number:	**AM 01**
Amendment date:	**23 February 2011**

Thank you for submitting the above amendment, which was received on 25 February 2011. I can confirm that this is a valid notice of a substantial amendment and will be reviewed by the Sub-Committee of the REC at its next meeting.

Documents received

The documents to be reviewed are as follows:

Document	Version	Date
Interview Schedules/Topic Guides	AM 01 Version 2.0	23 February 2011
Letter of invitation to participant	AM 01 Version 2.0	23 February 2011
Participant Consent Form: Organisational/Clinical Leaders and Medical Staff	AM 01 Version 3.0	23 February 2011
Participant Consent Form: Focus Groups	AM 01 Version 3.0	23 February 2011
Participant Information Sheet: Organisational/Clinical Leaders	AM 01 Version 3.0	23 February 2011
Participant Information Sheet: Medical Staff	AM 01 Version 1.0	23 February 2011
Participant Information Sheet: Focus Groups	AM 01 Version 3.0	23 February 2011
Protocol	AM 01 Version 2.0	23 February 2011
Notice of Substantial Amendment (non-CTIMPs)	AM 01	23 February 2011

Covering Letter	AM 01	23 February 2011

Notification of the Committee's decision

The Committee will issue an ethical opinion on the amendment within a maximum of 35 days from the date of receipt.

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval for the research.

09/H0302/102:	**Please quote this number on all correspondence**

Yours sincerely

NHS Foundation Trust

Directorate of Education, Training and Research

Research and Development Department
The Education Centre

Our Ref: Research

Tana Makoni

Infection Prevention Control Nurse Specialist

31st December 2009

Dear Tana,

Re: Exploring the Influence of Culture on Staff Compliance with the Standard Precautions for the Prevention and Control of Infection in an Acute Hospital Joint Replacement Unit (JRU)

I am writing on behalf of the Research & Development Group (RDG) to advise that on receipt of Ethic's Approval today, the above trial was given R&D approval. I am pleased to confirm site recruitment of [redacted] University Hospital NHS Foundation Trust can now commence.

As always within the NHS, approval for this study is granted on the understanding that you will abide by the requirements of the Research Governance Framework issued by the Department of Health and all other relevant legislation. It is your responsibility to ensure that this project is conducted in accordance with the agreed protocol and that all storage and transfer of data complies with the Data Protection Act 1998. I would be grateful if you would ensure compliance with these instructions.

With regard to patient recruitment firstly you need to ensure that as patients are recruited the copying instructions detailed on the bottom of the Consent form are adhered to; the patient should always retain the original signed consent form together with a copy of the relevant Patient information Sheet. A further copy of the signed consent form needs to be made and sent to the [redacted] R&D department to ensure patient accrual data is accounted correctly.

For trials involving patients you need to be aware of Trust R&D policy and the importance of placing a copy of the signed consent form and associated Patient Information Sheet in the patient's main NHS hospital notes, is to ensure that other clinicians are informed about the patient's participation in the research project; together with documenting any details in the patient's main NHS hospital notes regarding specific research visits, treatments or interventions that are undertaken.

In accordance with the Department of Health requirements regarding NHS Medical Notes retention an agreement has been made with the Trust's Information Systems and Standards Manager that any patients involved in research must have their NHS Medical Notes 'flagged' with a trial sticker and marked for retention for a minimum of 15 years, to comply with this requirement please find enclosed a sheet of Trial stickers. For each patient recruited one of these stickers need to be completed and placed on the bottom of the inside front cover of the patients NHS Medical Notes.

Once the study is underway you will need to keep us informed of its progress, and your prompt assistance in completing quarterly progress reports issued by the [redacted] R&D department would be much appreciated. Additionally you should be aware that you might be required to participate in the audit of compliance to the Research Governance Framework, which is undertaken in a proportion of projects each year.

Chairman: [redacted]
Chief Executive: [redacted]

You will also need to inform the [redacted] R&D department if there are any changes to personnel, the protocol or any other documentation involved in the study. Additionally any adverse events should be reported to the [redacted] R&D department and also via the [redacted] University Hospital NHS Foundation Trust's Incident Reporting system.

Furthermore please note that any individual or members of a team intending to conduct research within [redacted] University Hospitals, in accordance with Trust policy and Department of Health Research Governance Framework, must have undertaken Good Clinical Practice (GCP) training.

You are reminded that failure to comply with any of the specifics detailed within this formal R&D approval letter could result in withdrawal of R&D approval. If you have any queries about any of the arrangements for this study, [redacted] Research Management & Governance Facilitator who is based in the R&D department, Education Centre at [redacted] University Hospital will be happy to assist you (Extn [redacted]).

I wish you every success with the project.

Yours sincerely

Chair Research & Development Group, **Associate Director,**

Enc.: Project Risk Assessment

Project Data Protection Checklist

Data Protection Act 1998 Guidance Notes

Trial stickers for recruited patients NHS Medical Notes

University of Essex

Research and Enterprise Office

Telephone: 01206 872922
Fax: 01206 873894
E-mail: reo@essex.ac.uk
Web: www.essex.ac.uk/reo

Colchester Camp
Wivenhoe Park
Colchester CO4 3
United Kingdom
Telephone: 01206
Fax: 01206 873598
Web: www.essex.ac

24 August 2009

Ms [redacted]
Co-ordinator
Essex 2 Research Ethics Committee
EoE REC Office (3)
Level 9, Terminus House
The High
Harlow
Essex
CM20 1XA

Dear Ms [redacted]

Exploring the influence of culture on staff compliance with the standard precautions for the prevention and control of infection in an acute hospital Joint Replacement Unit

I am pleased to confirm that the University of Essex will act as Co-sponsor, together with the [redacted] University Hospitals NHS Foundation Trust, under the Department of Health Research Governance Framework for Health and Social Care for the following research project undertaken by one of our postgraduate students:

Chief Investigator:	Miss Axilia Tanakasei (Tana)
Department:	Health and Human Sciences
Project Title:	Exploring the influence of culture on staff compliance with the standard precautions for the prevention and control of infection in an acute hospital Joint Replacement Unit
Academic Supervisor:	Dr [redacted]

For avoidance of doubt the University of Essex will not act as Sponsor for Clinical Trials of Medicinal Products which fall under The Medicines for Human Use (Clinical Trials) Regulations 2004.

Yours sincerely

Research Governance and Planning Manager

cc Dr [redacted] Department of Health and Human Sciences

THE QUEEN'S AWARD FOR ENTERPRISE 2005

Appendix: 8 Assistant/Transcriber's confidentiality agreement

Name of researcher: Tana Makoni

Name of assistant:

I confirm that I agreed to maintain confidentiality at all times before, during and after taking notes in focus groups and the transcribing of 4 individual and 1 focus group interviews as requested.

I confirm that I have deleted all the paper notes and transcript and audio-taped files from my computer and all transcription equipment.

Assistant/Transcriber Signature: …… Date: …..

Researcher Signature ……..Date ……

Appendix 9: Elvis, Leader: Interview transcript 27/09/10

TM: Elvis, [fictitious name] thank you for agreeing to participate in my research which I am doing as a requirement for my doctoral degree at the University of Essex. I am looking at culture and compliance with infection control policies and guidelines in the JRU. The word 'culture' in my research refers to how JRU operates and how the norms, assumptions, beliefs, experiences and attitudes shared by the staff who work there affects their behaviour in terms of complying with recommended precautions for the prevention and control of infection control in that ward. Shall I start by asking you what your thoughts are on this?

Elvis: Ok, well on the larger scale I suppose there is a general desire to minimise infection, erm and that is done by a number of ways. So for the management team, they would want purely on the basis of figures to see less infection going through a particular ward for example JRU erm because they would equate that with better outcomes; which is better reputation and therefore more attractive hospital. So it has a political and financial benefit. The financial benefit clearly is also evident in the management sector because they would want to know that the treatment being offered was best value and any infection will involve more expense because it's a longer and more difficult treatment process. Erm, for people er beyond that, I will then probably start with the doctors; and there are different grades of doctor: as a senior doctor, I 'm clearly not wanting to be associated with causing infection; so I want to be sure that what I do minimises the risk of infection. The fact is, what I do is a dangerous job. I can cause infection by operating on people. I would also encourage my team, my registrar, my juniors to support me in reducing the risk of infection erm by being attentive to individual cases as well following general polices and guidelines. So I think in terms of the culture, it would be a mixture of individual care plus policy care for the department. Erm I suppose it's best summarised by saying everybody in the team believes and practises in a similar way that minimises the risk of infection. Erm, the nurses I suppose would be included in that because they are a very important part of the team. Erm generally my hope would be that they would follow the guidance from the doctors, which one would assume is good, erm to minimise infection and that they wouldn't in any way reject or do their own practice unless it was agreed and in accordance with the doctors' belief of what best practice was. So really, from a cultural point of view, which is your question, it's more a culture of the way that you have practised as a doctor and what you believe to be important that has a bearing on this, and the only difficulty could be if you are in conflict with either other doctor groups or with the other staff such as the nurses.

TM: You talked about policies, what are your thoughts regarding staff compliance with policies for preventing infection on JRU?

Elvis: Well, policies are good in general. All a policy can ever do is be a guide to how to practice in general. Erm, one has to interpret what the policy means and every individual has to interpret it for his or herself; say for example, erm, a policy of how one handles or does dressings or change a dressing, erm whether it's in a clean environment or by the bed side er whether that is one or more nurses involved in the process, whether they wear gloves and aprons and the general cleanliness element, there may be policies if you like, erm that enables someone to follow best practice but the actual procedure of doing it comes down to the individual interpreting that policy to what they believe to be the best thing. I wouldn't therefore necessarily have a problem with the policy, the policy being to minimise the risk of infection and to give best practice, but the actual procedure, the way that they do that, I may take issue with, for example, if I saw someone doing it in a dirty environment or potentially dirty environment, that would be less satisfactory than if they had a clean area to do it, for example. Erm, equally I think there is a training element to this, some nurses are more experienced than others and some of that experience can be valuable in improving a procedure and possibly enhancing the policy as well. Erm the policy makers often unfortunately [soft laugh] are not the people doing the procedure. So they 're a bit remote from it; sometimes the policy isn't appropriate in its initial form and it has to be modified and in my experience, it's quite hard to modify a policy. It can be done but it's not easy.

TM: Because I 'm focussing on JRU, there is a policy there about ring fencing, what are your thoughts about that policy?

Elvis: Orthopaedics is the cleanest specialty in the hospital by a long way. Anything that protects that cleanliness has to be good. Erm, the name 'ring-fencing implies that patients are not mixing with other healthcare groups which potentially could infect or dirty the orthopaedic process. We go through quite a strict process in preparing patients-let's say for joint replacement, erm in terms of their own body cleanliness, the use of antibiotics, the timing of antibiotics and so forth, and to get that muddled up with other cases where it's not so critical, is wrong. So in ring-fencing terms, it would be separation of the orthopaedic cases from the other cases. Physical ring-fencing of them [patients] is more difficult because of the way the hospital operates. I, and I know a number of my colleagues feel that we should have beds separate from the beds of other specialties; so that we can collect together in one place good practice for orthopaedics without them having to be diluted in treating other types of case or other specialty cases. So in that sense I think ring fencing is highly desirable.

TM: Do you have any comments on the current situation of JRU?

Elvis: JRU doesn't exist anymore! JRU has been closed which is a poor management decision, very poor indeed! Erm, one of the difficulties is that we're now by virtue of the nature that we have to reduce our beds having to share; we're sharing the new ward what used to be JRU with other specialties and they [management] have put on the ward [JRU] so called 'clean' cases and the definition of 'clean' is not clear to me or very often to my colleagues. The interpretation of 'clean' is different for different people. We've also gone away from joint replacement. The idea that joint replacements are the most critical cases to be kept clean has been lost because the ward has been closed. But in general terms, if you talk about the old JRU, I would say the practice is very good procedure based on a sound infection policy, partly because it was overseen by the ward manager, the sister. She kept an eye on the practice of her staff nurses and others and would enhance or promote good practice where there was a problem. Erm, all the doctors were very happy to rely on her and trusted her to do that.

TM: From my understanding the ward is primarily a Joint Replacement Unit at present, although it has been moved to a different location and two thirds of it is still JRU?

Elvis: No, it's not a JRU [with emphasis] It's definitely not JRU anymore, and there's a real worry here; you only have to take a walk down to the ward on a Monday morning to realise that the beds are occupied by unsuitable patients. You only have to see a busy take from the night before to realise that the bed managers have put in cases erm in the night time on that ward which are not appropriate. This of course then blocks beds for elective surgery and it means that you've got in adjacent beds erm patients who may be either bleeding or having irrigation or something of that nature alongside patients who are waiting for their joint replacement. Same nurses who are attending to both and whilst top level nursing practice would mean that the nurse would not cross infect patients, one has to admit that there is a risk that's higher when they are treating different types of patients so close to each other. As a nurse, you can't ignore the person next door if you're treating this patient, simply because they're from another specialty. So JRU does not exist anymore in that sense.

TM: Why do you think staff fail to comply with policies and procedures for infection control and prevention?

Elvis: Erm, sometimes people think they're being innovative and they're doing something that is the latest technique which hasn't been agreed at policy level. "You can have a blatant disregard for policies and procedures, if people are objectionable to them. Erm sometimes they omit to do what the policy requires either because they don't believe in it .. erm there is an element of interpretation required, and I think that is a factor for individuals. If

you were to sit somebody down with a policy document and ask them to interpret it; erm and if you did that for let's say 10 members of staff, I dare say you'd get 10 different interpretations of it. So, hopefully what you would get is a general theme of the importance of key elements of that policy. Erm, the other thing that concerns me is I 'm not always sure that members of staff are aware of the policy in its holistic stance. The policy may be written quite thoroughly but it isn't followed as thoroughly, erm and that very much depends on whether the staff have read and understood and acted on the policy. There's no formal assessment of that that I 'm aware of.

TM: What organisational barriers or factors do you think impede staff from complying with policies procedures in everyday practice?

Elvis: Erm, I think for good policy in infection control to work, there has to be a sense of togetherness amongst the staff; there has to be a team and that team isn't just for nurses on the ward, it includes infection control staff, I think it includes the doctors, I mean and indeed the microbiologists and I'd like to say it includes the management who support the idea; but medical best practice with regards to infection is something that we should all erm embrace. That sense of teamwork is lacking very often [with emphasis] and that's a barrier to best practice. Erm, now the question then arises, who should lead the team?

TM: Yah

Elvis: erm and it needs to be somebody who has the authority. Now that doesn't mean to say it has to be a senior person. It has to be somebody who has been empowered to engage all the groups and tell them or discuss with them at least what we would agree what's best practice in certain situations. Er, inevitably, there would be compromises because we couldn't all agree. But if we had a person who we could refer to who had the ability to act on any concerns or differences of opinion, that would be a good way forward. Over time, that would mean that the policy could be refined quite quickly cos the problem with policies is, they are not changed very quickly; erm procedures can be changed fairly quickly but policies don't tend to be and we need somebody out to help controlling it properly, and that's lacking at present.

TM: and that somebody, how senior should they be in terms of authority?

Elvis: It's suppose to be done by a clinical member; so either a doctor or a ward manager or perhaps a senior staff nurse. I don't think a junior member of the team should do it. I think it should be somebody who is in the Trust for quite a long time, not likely to change their job and somebody who understands what the importance of this is and can do something about it. If it's somebody less senior, then within that group, senior members have to agree either that person is in charge [pauses] because otherwise you're going

to get desperate voices; we need somebody who has control and is given the power of changing things if need be.

TM: I've got some prompts here: erm, I just wonder whether workload has an impact on infection prevention and control? What are your thoughts?

Elvis: Workload is interesting because erm we've all experienced in terms of practice, a busy time working and yet a productive time of working. Just being busy doesn't necessarily mean you get bad or worse with your care. Erm, it hinges on the organisational elements of it and your priority setting. So, if you give priority to cleanliness and infection control and even if you're busy, that could be the first thing that you attempt and other elements of the care could be relegated to a lower level, erm and I think most patients would understand that. You know it's more important that their [patient] room is kept clean, than whether their television is working by the bedside. I hope most patients would accept that. So workload doesn't necessarily have to be a problem. In reality of course workload does distract one from doing the basics and that might be because the priorities are wrong and we need to give proper order to the priorities. So within the whole care of the patient we need to say that infection control is the absolute number one priority [pauses], then after that, everything else will fall into place.

TM: views on staffing levels and skill mix, including the use of bank and agency staff?

Elvis: Well that's significant because they [bank and agency staff] are not part of the team. They are just drafted in now and then, they won't read the policies, probably won't know the procedures. Erm, it makes it harder for those staff who are on duty because they have to oversee the agency as well as do their own job and they can't do their own job fully because they are doing the job of one and half people instead of their own job. So that's a massive problem.

Staffing levels, well clearly, there should be an optimum ratio staff to patients and I 'm talking about qualified staff. Erm, the healthcare workers [healthcare assisitants] erm are valuable as long as they know what they are doing but they are not the same as staff nurses in terms of interpreting and enacting the policy. So, I think the levels of staffing and their skill mix therefore have a major factor.

TM: Bed occupancy?

Elvis: Huge problem! Erm, it's been known about this for long time; the higher your bed occupancy the higher er likelihood it is that care will suffer and one element of that is raised infection rates. That's been shown in this hospital and many hospitals I've worked in previously. Erm, I believe the optimum bed occupancy is in the region of 70 to 75% and I know that that this Trust is well into the 90s and often close to a 100% at times. Erm, you know the risk of cross infection, the risk of reduced quality care is significant to that situation.

TM: Multidisciplinary working in terms of roles and responsibilities, just wonder whether you have a view?

Elvis: Erm, as long as there aren't too many chiefs! if everyone is a chief, then you get nothing done. You need somebody in overall control, so, you do need the value of multi-disciplines because we are all experts in something, erm, but we need to agree a common way of working with regard to infection control; and anybody who dominates that is likely to skew the overall process. Erm so lots of disciplines are good but ultimately it has to be one authority agreed amongst the group who will see things through.

TM: How about the way in which all disciplines work in oh, gosh, I can never remember the name of the ward as you say it's not JRU now?

Elvis: C ward [fictitious name] ?

TM: Yeah-the way all these multidisciplinary staff work in C ward-what's your view on that?

Elvis: Do you mean lots of different specialties then?

TM: the nature of the ward; it's a multidisciplinary ward isn't it?

Elvis: It is now, yah! I mean, I think there are many specialties using the ward, perhaps that's what you mean

TM: but even before, JRU was a multidisciplinary ward wasn't it?

Elvis: Yes it was but one always had the sense that orthopaedics was the controlling force and therefore the standards applied to orthopaedics would be appropriate every where, but in C ward [present format of the ward] those standards are different, because whilst the orthopaedic trained nurses have a wealth of knowledge to manage orthopaedic patients and how to reduce the risk in every sense not just infection, the other specialties have a very different approach, and the surprising thing to me is how little the general surgical and urology nurses know about orthopaedic patients and vice-versa. So there is a conflict rather than cooperation. Obviously there have to work in a cooperative way but the conflict could undermine good practice.

TM: Leadership on that ward and management: any view regarding infection prevention and control compliance?

Elvis: No question-I mean the sister, the senior sister has to be the leader. She is the one I mean, she's the nearest thing if you like, to a matron on the ward, to which all the consultants on behalf of the medical teams refer, and if there's a difficulty they go to sister-and absolutely right and proper because sister has the overall perspective of care available to them. Erm she will know the good and the bad of the ward, she will know the areas where things have to be improved and by enlarge she will know the means in which to address those. She will know the people to contact, how to organise improvement, how to draft in other disciplines where needed, how to enlist the help of the consultants. So that leadership is crucial.

TM: What organisational factors do you think facilitate compliance with infection prevention and control in a small functional unit like C ward?

Elvis: Erm, well I think organisational factors are clearly a mixture of the nature of the work, the erm training that the people receive, perhaps something about assessment of competencies and in the end some people are cut out to do a particular role better than others; say for example, not everybody would be a good orthopaedic nurse, just as not everybody would be a good urology nurse. So in terms of the actual staff, I think they all have an interest, you know. My interest is in orthopaedics but I have colleagues who do general surgery, and you know our interests will be very different for obvious reasons and I think it's true also in the staff; you can't take a nurse and make her into a different type of nurse overnight. She could be persuaded to work in a different way perhaps but she might always resist it slightly or he, I don't mean to be sexist. Erm, so, I, I think there are elements of erm vocation, if I can use that term, that may be appropriate, and I don't think the organisation allows for that; they see people as numbers without it being the individual component and that's one of the sad things in the organisation that we've lost.

TM: Why do you say that or what has led you to have that view?

Elvis: because if you talk to the hierarchy of nursing, you talk about numbers of nurses on the ward, nothing to do with training competences or skill mix, they talk about the numbers of bodies attending the patients, and that's very different. It's a little bit like saying, 'within a week I do 5 hip replacements, I 'm less effective as a surgeon than somebody who does 25 carpel tannel operations', which is a much quicker and easier thing and you could look at the numbers and say, 'the carpel tannel surgeon is a lot more productive than I am'; you're not measuring the same thing. They're not comparable and the same is true with staff. You're not comparing like with like and support workers, no matter how good they are, are not the same as staff nurses and

the staff nurses with an interest in orthopaedics and infection control is far better than one who isn't.

TM: So how can infection control practice especially compliance with measures in **place be improved?**

Elvis: erm, name and shame some people! I think that's what we have to do. Erm, organisations that are more ruthless than the NHS tend to keep the good staff and the staff they keep work to a better standard because they know that there is something at risk; potentially their job is at risk, erm and whilst I don't want anyone to lose their job in one sense, I do want the best outcome for the patient. So patients must come first; that's what we're about! I have to answer those complaints and I try and use that as an opportunity to educate them [staff] or sometimes to prevent them doing the same thing all over again, i.e. they're prevented from doing a particular type of treatment. But the individual has to know, it's no use covering up the fact that there is a problem; we have to address it 'head on' with the member of staff or the groups of staff that are causing the problem and change their practice, and until that's done and people accept that's the right way forward, I don't see that we can make steady progress on this.

TM: So you think there is a softly-softly approach in the NHS?

Elvis: It's hopeless, it's hopeless.

TM: Erm any other comment that you might have on this subject?

Elvis: Erm, well I feel strongly that infection control is utterly desirable, not just for orthopaedics; I mean, in many things, orthopaedics leads the way in this Trust, erm strongly so in terms of our working practice, our organisation, the way we operate in theatres, there are many things that we do that set a good standard. Anything that erodes that is undesirable. Erm, so for me I think the, the importance of clinical effectiveness, if I can use that, is paramount and infection control is a good example.

TM: Thank you very much, I really appreciate your time.

Elvis: OK