BEYOND BASICS: EMBEDDED INFECTION CONTROL IN EVERYDAY PRACTICES OF NURSES IN AN INTENSIVE CARE UNIT

A thesis submitted in fulfilment of the requirements for the award of

Doctor of Philosophy

Allison Roderick BN, RN, Grad Dip (Critical Care) MN

School of Nursing & Midwifery, Faculty of Health Sciences
Flinders University Adelaide, Australia

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NOTATIONS THROUGHOUT THIS THESIS

Data is placed in italics and in a different size font to the body of the thesis; for example,

> *If I'm looking after a patient, I either have a plastic gown, which we don't tend to use a lot of, or a cloth gown and I get rid of it when I'm finished doing my patient care. Beatrice*

As a representation of the researcher, the Allison is used; for example,

> *Allison: I'm just trying to explore that a little bit deeper - you know, is it something that is part of your everyday practice?*

Pseudonyms have been used and given to nurses and patients within the study to protect their identity.

All interviews were transcribed verbatim. However, to make assist the reader understand the meaning of the spoken word when written some editing has taken place to make it flow. Take the following example from Beatrice final interview

> *Do - what do people do and do people take the next - do they think of all the options or what do they do?*

However to assist with the flow of reading the spoken word, some words are removed and the symbol // are inserted. The following transcript would appear

> *//what do people do // do they think of all the options? What do they do?*

Further to this, the hospital where the study took place has not been identified in any way in the body of the thesis, and is simply referred to a Capital Hospital. All correspondence on letterhead has been removed to ensure the hospital setting remains anonymous. All hospital policies, procedures and communiqué have been de-identified. A number of policies and procedures have been copyrighted, in these instances the publication year and the title is identified, however the hospital organisation is not identified to protect the identity of the participants.

ABSTRACT

Infection control is concerned with the control of infectious agents; that are defined socially as much as they are medically. Socially, germs are perceived as dirt, pollution and danger. Medically, they represent infection, illness, disease and risk. Symbolically, infectious agents engender fear, isolation and separating practices. In healthcare this fear, isolation and separation is located in infection control policies and practices that prevent cross-infection and the outbreaks widely discussed in scientific and tabloid papers.

By focusing on infection control practices this research explores how nurses navigate their work in intensive care units (ICU), providing nursing care within infection control guidelines. Using ethnographic methodology, this study explored nurses' practice in ICU to discern infection control practices in the everyday. Nursing practices were explored by applying Bourdieu's theoretical approach to practice to ascertain how different forms of knowledge, such as policy or practice, were underpinned by knowledge embedded within that practice.

Moreover, Bourdieu's concepts of field, knowledge and capital enabled exploration of the ethnographic data. Firstly, nursing practice was noted as constructed around objectified forms of knowledge such as standard precautions, accepted as *doxa,* to manage the risk of exposure to blood and bodily fluids. Nurses demonstrated what Bourdieu terms their cultural 'feel for the game' as they navigated between the distinct cultural fields of intensive care and infection control. This navigation was dominated by requirements of intensive care and the patient's critical status. Secondly, this study showed the subjective in the field of nursing through application of the idea of *habitus* as embodied practice to how nurses worked to identify matter out of place within their daily work.

Finally, Kristeva's notion of abject and bodily boundaries enables nurses' infection control practice to be explained as containment within ambiguity. Infection control is aimed at controlling matter that is invisible. Current orthodoxy created confusion, fear and conflicts with infection control nurses. Nurses demonstrated that in trying to control out of place matter, they experienced infection control simultaneously as a subjective and abject space, locating nursing in-between the lived spaces between dirty/clean and infectious/non-infectious.

By focusing on actual accounts of everyday nursing, infection control practices are understood as *within* nursing and not separate *from* nursing. They form the fabric of nursing within a context of intensive care work. Hence, nurses were often considered non-compliant with infection control policy because their infection control practices were intertwined with ICU knowledge, where patients' acuity dominated what ruled practice in each case.

Infection control is often viewed as an activity that is added to keep nurses and their patients safe. Nursing practice across two fields threatens assumptions about the privileging of what infection control (in its forms of standard and additional precautions) *are* and *should* be. As such, accounts to date of non-compliance and surveillance of infection control practices fail to explore this incorporation and interplay of different forms of knowledge at work in nursing practice. Now the challenge is to not locate infection control outside of, or separate from, practice but to recognise and value infection control within practice.

CANDIDATE'S DECLARATION

I, Allison Roderick, certify that this thesis does not incorporate with acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed

Allison Roderick

Dated 30th July 2014

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To the incredible nurses and patients at Capital Hospital: for allowing me to share the colourful tapestry that is called nursing practice. To my colleagues and friends at Flinders University School of Nursing and Midwifery, thank you for listening to the whingeing, complaining and allowing me to sort my ideas in our many conversations.

This thesis could not have been achieved without the commitment of my family. Thank you for believing in me and allowing me to try and achieve something that I believed was out of reach. To my two beautiful children, Georgia and Jacob, my beautiful gifts during my PhD journey; thank you for letting mummy 'write her

book'. Let this be a testimony to you both that with a little hard work and giving it a go you can achieve anything.

To my parents and my in-laws thank you for your constant support of me and us as a family. Special thanks go to Brian and Elizabeth Roderick (my in-laws) who put in extra effort and helped with the children (and the house) so that my masterpiece could be completed.

I would also like to acknowledge the assistance of Michael Russ for his assistance with the floor plans and Tina Thornton for her meticulous attention to detail in the editing of this thesis. To Lee Cain who is like a sister and who constantly encourages me. To Anne Davies and Uncle Clive who teach me bravery. Finally, to Tran my postie and barista who serves me coffee with a smile and who constantly reminded me what it means to work hard.

Last, but not least, my dear husband Stephen. The idea of 'dirty nursing' (Roderick 2010) has been with us for nearly as long as there has been an 'us'. Thank you for believing in my ability to get this done. No words can actually describe this moment or what this means, but thank you.

LIST OF ABBREVIATIONS

ACCCN	Australian College of Critical Care Nurses
ACHS	The Australian Council on Healthcare Standards
AIDS	Acquired immunodeficiency syndrome
AIHW	Australian Institute of Health and Welfare
ANCA	Australian National Council on AIDS
ANMC	Australian Nursing and Midwifery Council
BOOP	Bronchiolitis obliterans with organising pneumonia
BP	Blood pressure
BSI	Bloodstream infection
CDC	United States Centers for Disease Control and Prevention
CLABSI	Central line acquired bloodstream infection
CN	Clinical Nurse
CNC	Clinical Nurse Consultant
CPAP	Continuous positive airway pressure
CT	Computerised tomography
CVC	Central venous catheter
DHA	Department of Health and Ageing
ECG	Electrocardiogram
ED	Emergency Department
EN	Enrolled Nurse
ET	Endotracheal tube
GBS	Guillian Barré syndrome
HAI	Healthcare-acquired infections
HCW	Health care worker
HIV	Human immunodeficiency virus
H1N1	Influenza A virus
IDC	Indwelling urinary catheter
ICU	Intensive Care Unit
IV	Intravenous
MERS-CoV	Middle East respiratory syndrome coronavirus
MRO	Multidrug-resistant organism
MRGN	Multiresistant gram-negative bacillus

MRSA	Methicillin-resistant *Staphylococcus aureus*
NG	Nasogastric
NHMRC	National Health and Medical Research Council
NM	Nurse Manager
NMBA	Nursing and Midwifery Board of Australia
OPA	Orthophthaldehyde
PICC	Peripherally inserted central catheter
PC	Pressure control ventilation
PPE	Personal protective equipment
RN	Registered Nurse
SARS	Severe acute respiratory syndrome
SIMV	Syncronised intermittent mechanical ventilation
UTI	Urinary tract infection
VAP	Ventilator-acquired pneumonia
VCAIC	Victorian Advisory Committee on Infection Control
VRE	Vancomycin-resistant *enterococcus*
VISA	Vancomycin intermittent *Staphylococcus aureus*

GLOSSARY OF TERMS

Additional precautions: a range of precautions used for patients known or suspected of being colonised or infected with an infectious agent that cannot be controlled with standard precautions alone. Precautions are based on source of transmission: contact, airborne or droplet transmission.
Alcoholic hand gel or rub: a means of sanitising hands without the use of soap and water.
Anteroom: a small room between rooms.
Asymptomatic infection: infection that does not display any clinical symptoms, but can still be capable of transmitting disease.
Asepsis: a method of preventing infectious agents contaminating the skin, the human body or sterile instruments.
Bacteria/bacterium: small unicellular organisms otherwise known as a germ or microbe.
Cardiac arrest: where the patient's heart stops causing a lack of oxygen to the body and vital organs.
Cardiac medications: a range of medications that improve the activity of the heart by increasing or decreasing blood pressure or how fast the heart beats.
Cardiac output: the measure of blood volume ejected from the heart in one minute
Central venous catheter: an intravenous catheter that is inserted into a vein to administer fluids, mediation or monitor pressures in the heart.
Cleaning: the physical removal of foreign material, for example, dust, soil, organic material such as blood, secretions, excretions and microorganisms.
Clinical contact: staff who have contact with patients as part of their treatment.
Colonised: the presence of microorganisms without causing disease or damage.
Contamination: moving microorganisms or foreign matter to an area that is considered sterile or living tissue.
Continuous positive airway pressure (CPAP): an ambiguous term that refers to a mode of ventilation and a form of assisted positive pressure to assist breathing.
Clinical Nurse Consultant: the nurse in charge of the overall running of the ward or unit.
Dialysis: a treatment for patients experiencing kidney failure to remove excess fluid and wastes from the body.

Disinfection: inactivation of non-sporing microorganisms using either thermal (heat alone, or heat and water) or chemical means.
Guillain-Barré syndrome: an autoimmune/immune mediated disorder causing peripheral nerve weakness. Characterised by a quick and progressively worsening state of muscle weakness following a viral illness.
Hazard: an agent (biological, chemical or physical) that has the potential to cause harm.
Healthcare-associated infection: the terms health care associated, hospital-acquired and nosocomial infection are terms used interchangeably. A healthcare-associated infection is an infection contracted while in a health care facility.
Infection: presence of microorganisms that cause disease.
Infectious: refers to an organism capable of causing disease.
Infectious agent: a term used to include all substances that could potentially cause disease this includes bacteria, virus, parasites and fungi.
Inotropes: drugs that improve cardiac/heart activity by improving blood pressure or improving the amount of blood pumped by the heart.
Laminar flow: (also known as negative pressure). Denotes a type of ventilation/air conditioning system that creates a negative pressure in relation to surrounding air pressure.
Mechanical ventilation: assisting with breathing through the use of a ventilator, often referred to in tabloid press as artificial life support.
Microorganism: any organism requiring a microscope to see.
Nasogastric tube: a tube threaded into the stomach via the nose to assist with gastric emptying or feeding the patient.
Pathogen: any microbe capable of causing a disease.
SIMV: see under Ventilation.
Skin disinfectant: an antiseptic applied to skin to prevent the transmission of transient or resident skin bacteria from person to person.
Standard precautions: basic level of infection control to protect people from exposure to blood and bodily fluids. This includes hand hygiene and the use of personal protective equipment such as gloves or goggles.
Sterilisation: complete destruction of all microorganisms, including spores.
Ventilation: in most instances ventilation refers to mechanical ventilation by using a ventilator. Ventilation can be used to optimise a patient's respiratory and gaseous

exchange function. This can include a range of modes that partially or fully support the patient's breathing needs: common modes include SIMV and PC.
Virulence: the ability of a microorganism to cause disease.

DEDICATION

Dedicated to Stephen, Georgia and Jacob

In loving memory of Nana Gran
Elaine Alison
(1926–2013)

PREFACE

As a registered nurse (RN) I have been lucky, no privileged, to have travelled with my nursing career; from the small rural hospital to the bustle of tertiary intensive care units (ICUs) in Australia and the United Kingdom (UK). The similarities and differences have enriched my practice and made me the RN that I am today. The majority of my career has been as an ICU RN, providing bedside care to the most critically ill patients. It was while working in this busy life and death environment that I began to reflect on nurses' infection control practices.

In my experience, infection control rarely was spoken about, the exception being when there was a diagnosis of methicillin-resistant *Staphylococcus aureus* (MRSA). More commonly referred to in lay terms and in the tabloid media as a superbug, MRSA is a bacterium that is resistant to many of the usual antibiotics used to treat infections. In the hospital setting, MRSA required the use of additional precautions, and patients would often be moved to an isolation room. To the outsider the physical layout of the isolation room did not appear any different to any other room or bay in the ICU. The room contained typical items, such as the bed, ventilator, monitor and the benches full of the usual accoutrements: medication, intravenous giving sets, linen and resuscitation equipment. But the more notable difference was in the staff that entered and left the bay. Draped in gowns, gloves and mask, there was the swish and rustle of the plastic gown, the muffled voices of the nurses behind masks and nurses standing at the 'edge' of the bay calling for assistance. On one such day an academic colleague said to me: 'What must it feel like?' It was at that moment that I considered what it must feel like for patients waking from a drug-induced coma to see a set of eyes above a face mask, only to be touched with latex gloves and to hear conversations like 'You can't come in. They have got MRSA. You must wear a gown' or 'Have you washed your hands?'

These concerned words from a nurse regarding their patient's infectious status and as a way of protecting others was not always so subtle. I recall caring for a dying woman in an isolation room. On this occasion she had several multiresistant organisms (MRO), *Pseudomonas aeruginosa* and *Klebsiella pneumoniae*. Due to her medical condition and the infection her time in hospital was prolonged and painful. During this admission she had undergone drastic surgery to remove (amputate) both her hands and feet. Her weakened state meant that even though she was alert and aware she remained ventilated. As the weeks passed by and her condition deteriorated she took pleasure from the simple comforts of friends, family and the television. One simple request, however, was overlooked. She wanted to die in her own clothes. She simply wanted to put her own pyjamas on and go to sleep. She was not asking for euthanasia or to be put to sleep; no she wanted to die in her own clothes, a request that was denied as she was in the isolation room. To this day I still wonder why.

At other times concern led to panic or reprimands. While I was working as an RN in the UK, a patient newly diagnosed with MRSA was quickly moved to the isolation bay. I watched from the sidelines to see a critically ill and very unstable patient move the short distance from the general ICU to an isolation bay. In what appeared to be a rushed and panicked exercise the patient's central venous catheter (CVC) became disconnected and with it the inotropes that maintained the patient's blood pressure. Next, the patient had a cardiac arrest, but thankfully the patient survived. Reflection on this event indicated there are many ways to interpret what happened. Was it junior staff (medical and nursing) or panicked staff? Was the patient going to have a cardiac arrest anyway? Was it equipment failure, or an unsecured central line at the centre of this debacle? There are many factors that interplayed in this event. But one thing that was central to this situation was the panic and concern to move the patient as

promptly as possible to the isolation room. In my own reflection of this situation I asked myself 'would not standard and additional precautions protect healthcare workers and others from the transmission of these highly infectious agents such as MRSA? Was it really necessary to move the patient immediately?'

This panic and fear of spread was also demonstrated in a number of forms of surveillance. Personally I was the recipient of this surveillance when one day as I walked out of the isolation bay wearing a wrist watch. The infection control nurse was in the corridor outside the isolation bay and when she saw that I was wearing a wrist watch I was promptly reprimanded for wearing it in the isolation room. There was no questioning or discussion about my practices or what I had been doing in the room. I was just told in no uncertain terms 'remove that watch!' and berated like a naughty child. Now the debate about wrist watches continues and it is quite evident that items such as wrist watches can be a microbial source, but my concern was how did my wrist watch have the capacity to get into an open wound, an endotracheal tube (ET) or an invasive line? It reminds me of the biblical tale of attempting to remove the plank of wood from your brother's eye. How did these single objects and procedures become enshrined as rules, laws and habits, even rituals of nursing to be passed onto the next generation of nursing, in the guise of practical knowledge and know how? In nursing work there are different forms of knowledge that underpin practice. There appeared to be a lack of understanding of how infection control knowledge is embedded in nurse's daily practices.

CHAPTER ONE: INTRODUCTION

This is not about infection control

Infection control practices in the healthcare setting involve a complex process that ensures the safety of healthcare workers, patients and visitors. From the quality of food services, to the cleanliness of toilets, the sterility of equipment or the way that waste is disposed of, all these processes reflect the principles of infection control.

It is my contention that infection control is part of the everyday accounts of nurses' practice. It is my belief that nurses are highly invested in how infection control gets practised. Most notably, nurses in the acute care setting provide 24/7 bedside care to thousands of individuals. From the simplicity of attending to patients' bathing needs; or providing a comforting hand during sorrow, pain or elation; or to the complexity of invasive lines, procedures and techniques, infection control is everywhere in everyday acts of nursing. Infection control principles and practices are located and constituted in and through every part of nursing practice. Hence, it is my contention that explorations of the day-to-day practices of nurses found in the literature fail to uncover the richness of practice.

The question could be asked 'How do you get nurses to talk about practice?' when practice is such a nebulous concept. Melia suggests that nursing practice is 'difficult to describe or define' (Melia 1979, p. 58). The *New Oxford Dictionary of the English Language* describes practice as a noun as:

> the actual application or use of an idea, belief, or method as opposed to theories about such application or use … the customary, habitual, or expected procedure or way of doing of something … the carrying out or exercises of a professional, especially that of a doctor or lawyer: phrase in practice – in reality. (2001, p. 1455)

From this general definition of practice how does this meaning bear relevance to nursing? Paraphrasing this definition to contextualise practice in nursing is to assert practice *as the actual application of nursing or use of an idea, belief or method of*

nursing as opposed to the theory about this application in nursing. However, if you ask nurses what are their infection control practices, we have a common denominator. Nurses will talk about the actual things that they *do* and how they use an *idea* or a *method* to do that practice. In understanding what nurses actually do in practice and how infection control gets included into these everyday practices would enable a better description of what infection control means. To discover this meaning of infection control involves exploring nursing practice. Exploring between the prescriptive nature of rules, procedures and protocol manuals and nursing practice through what nurses do in relation to these actual prescriptions of infection control.

Within and around these 'actual practices' of infection control, nurses provide day-to-day care in the 'liminal space' between policy and practice. As practice does not occur in a vacuum, actual practices appear as hybrids: the layering of dynamic and static knowledge[1] all contributing to nursing practice. Therefore, this study focuses on this context to understand as Latimer asserts that:

> nursing is precisely local and specific, not standardised, and nursing can be many things: hesitant, incomplete, decisive, objective, subjective, concerned with dirt, the science and technology, with the heroic and the mundane, with bodies and with emotion and with thinking … it is a hybrid which occupies a peculiar space, the in-between. (Latimer 2000, p. 3)

Hence, in order to explain the very nature of this hybridity, infection control practices are to be used as a vehicle for understanding how such nursing practice can operate between objective rules and subjective practices. Infection control practices and for that matter, nursing practices, cannot simply be understood from the straightforward application of procedures and protocols to patient care. The problem with nursing is that it is also an action; we *do* nursing. Therefore nursing is also

[1] In this example I use the terms static and dynamic knowledge. By static knowledge I refer to nurses understanding of protocol or policy as these forms of knowledge are standardised for all users, not open to interpretation and often require a process to change how things are to be done such as procedural knowledge. Dynamic knowledge refers to how nurses use a range of knowledge from literature, research and includes practical know-how.

about body work, which Lawler describes as the problem of the body. That is, the body has two functions: organising knowledge, and the fact that the body is private, silent and fragmented in the way that we organise our knowledge about such body work (Lawler 1991, p. 2). To understand complexity and variation to nursing practice requires an exploration of *practices*. While it can be argued that research into a particular technique, such as hand hygiene or care of a particular invasive device, is useful for refining such a technique or care regimen, it does not show how nurses apply knowledge in each context and make meaning out of this knowledge and context. The knowledge about infection control practices as an account of nursing practice requires its complexity be uncovered.

Infection control in the context of Australian nursing and the everyday world where nurses provide care are guided by the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting*[2] (Department of Health and Ageing 2004). These guidelines are underpinned by five elements: basic infection control, quality management strategies, effective work practices, management of specific infectious diseases and strategies for specific settings. In nursing practice this is implemented with a two-tiered approach to infection control principles, in the form of standard and additional precautions. Standard precautions apply to all patients irrespective of infection whether suspected, confirmed or presumed; whereas, additional precautions are used as an additional activity when standard precautions are not considered enough to prevent transmission of a pathogen. The national guidelines continuously reinforce the need to use standard precautions in every situation and additional precautions when there is risk of spreading infection.

[2] The citing of *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (Department of Health and Ageing 2004) will hereafter be abbreviated to DHA 2004. The 2004 edition is used rather than the current edition as this was the guidelines used by the participants in the study.

From my experience I realised that infection control was more than just rote adherence to a policy; that infection control as a practice is a complex array of practices, policies and person(nel). This complexity is further complicated by the lack of visibility of infectious agents and how to fit this invisibility within practice. Nurses do not have the advantage of microbiologists and scientists who can visualise with a microscope the bacterium on a slide or sensitivity studies on an agar plate.[3] For nurses, infections are only made known through a phone call from the laboratory or a visit from the infection control team, confirming diagnosis. For nurses, the visibility of infectious agents is created by the donning of aprons, masks, gloves for routine practices. This visibility causes people to act in certain ways. The gowns, gloves and masks are therefore symbolic.

However handwashing, though paramount to infection control, is often rendered as basic practice. It is often one of the first skills taught to future nurses; handwashing is also something that we teach our children to do as well. So not only is it a fundamental and basic form of care it is also common for the public irrespective of class, culture, ethnicity or age. This practice of handwashing or, as science and medicine describe it, hand hygiene, is subject to a gamut of social reasons pressed on the individual as to why they must wash their hands. The obvious reason is to keep our hands clean. But the frequency and nature of hand hygiene is bundled up in social practices and understandings. Are these practices about respect, humility or purity, such as washing prior to prayer? Alternatively, the practice of handwashing or hygiene could be in relation to objects or 'things' such as food, animals, pets or the visible presence of dirt and soiling; or all, or some of these things.

[3] All nurses are able to observe changes in health status due to infection such as increase in temperature, heart rate, the presence of a rash, sputum or pus. But this does not indicate that the pathogen is 'infectious' only that one is present.

In Capital Hospital[4] (where the data collection took place) infection control is not described as a practice but rather as a program. The program is thus defined as a 'means to minimise infection risks for patients, employees, and the general public' (*Infection control manual* Capital Hospital 2000)[5] and then goes on to describe how health care workers have an important role in preventing the spread of infections. It then moves on to practices such as standard and additional precautions, personal protective attire and sharps management.

Underpinning this doctoral research project is my own research with my Masters of Nursing. In the late 1990s I conducted a pilot study exploring nurses' infection control practice in an intensive care unit. Previously, research on infection control practices has mainly focused around compliance with standards and policies. As the policy and guidelines are the standard it is easy to look at practices as being individual responses to these standards. Individuals' responses then get understood in terms of the group's activities, which often get played out in local news and tabloids as evidence that 'nurses don't wash their hands'. Though audits and compliance studies (Pittet et al. 2000; Mitchell et al 2002; Mitchell et al. 2013; Graf et al. 2013) may quantitatively identify adherence to policy and practices; unfortunately, they also create a culture of blame (Brewer 2011; Reed 2013). If an individual is not complying then there are assumptions about why they are not: is it intellect, training, access, or a more sordid issue of improper, malicious or even impure behaviour? However, when looking after the 'infectious patient' the nurses in my previous study could provide adequate rationales for their adherence or lack of adherence to the regulations and rules of practice. Take the following quote from one of the participants in my previous study:

[4] The pseudonym Capital Hospital will be used for the name of the hospital where the research took place.
[5] This exact reference cannot be disclosed to protect the identity of Capital Hospital and the participants in the study.

> Over the last six years of nursing I've had quite varied information given to me by different people. Whether it be from Infection Control people giving in-service, Microbiology in-service or whether it be my own reading, unit information and all of it has been different and I guess you try to put it all together to find a path that you've accepted your knowledge base on. (Gary interview, [Roderick 2001, p 71])

Gary was a senior ICU nurse with ICU training, and was considered both an expert and a skilled clinician; in this example he does not demonstrate himself as a clinician who is poorly educated, lacking training or unable to access the policy or protocol. He does not demonstrate that he is deliberately disobeying the rules of infection control practices out of some malicious intent to circumvent the power relationships in the unit. What I contend this exemplifies is a nurse using his training and education, together with experience and the best evidence available, to make evidence-based decisions. As Crossley (2007, p. 88) suggests, such a technique is both a bodily technique and embodied knowledge. Infection control practices are not simply following a rule. As demonstrated by Gary's account of infection control as a practice it is an embodied knowledge, the sum of all knowledge(s) expressed in his actions.

What may seem as obvious and simple methods of controlling infection in a laboratory through the donning of protective attire such as gowns or gloves, are less simple and clear in the context of bodily techniques and practice. My previous study found that nurses struggled to visualise infections.

> Here we see from the examples from the participants that the scientific classification system of organising disease and in particular pathogens requiring isolation is an ambiguous system. The orderly lines of the binary nature of science do not assist nurses to practice; they cannot visualise what is invisible. The identification of what would be considered clean and what is considered dirty or contaminated is indistinct, in-between and does not respect the borders that have been created by the use of additional precautions: the plastic aprons, the gloves, or the handwashing. (Roderick 2010, p. 244)

This invisibility and hybridity fascinated me—that infection control practices could be both a fundamental infection control technique and a basic skill. Infection control appears as both object and subject. It was not the tasks of infection control practices

such as hand hygiene that so fascinated me, but rather like Latimer I wanted to uncover the 'invisible work that accompanies it' (2000, p. 1).

As Latimer suggests, nursing is precisely local and specific, objective and subjective. Many espouse that to improve the infection control standards in hospitals requires better adherence to the infection control policy, procedures and protocols (Siegal et al. 2007; Kurup et al. 2010; Conway & Larson 2012; Graf et al. 2013). It is believed that through better understanding of what it is that nurses do then possibly there could be inroads made into the application of infection control practices and infection rates. However, Lock (2002) suggests that the notion of the simple application of techno-scientific knowledge as automatically improving individuals' health and society is a belief system that has been allowed to continue without question. I feel that Lock's questioning of this ideology in relation to infection control is an appropriate one. My aim is not necessarily to dispute a widely held ideology about infection control practices and their use in the health care environment or the intensive care setting. Rather this study seeks to understand what it is that nurses do as they go about their routine care of a patient that could be considered infection control practices—to question the mere application of one form of knowledge for the specific and contextual that Latimer says is core to such understanding. Latimer questions why there is an assumption within nursing and nursing theory that there are 'always better ways to do nursing' (2000, p. 3) and that we should describe nursing for what it is first. However, in this thesis, rather than just identifying one simple area of practice like infection control and endeavour to make it better, I see greater benefit to nursing and the work that nurses do, lies in uncovering the work that nurses do and how they contribute to the control of infection in the work of health care and its organisation.

The cookbook approach

Currently, it could be argued that infection control practices are approached like a cookbook. That is, by simply following the guidelines, infection control practices happens[6]. The cookbook approach to nursing as suggested by Lawler (1991), such as the form of infection control guidelines or 'programs', does not describe what nurses do, rather these are simply lists of recommended tasks. This cookbook approach could be likened to following a recipe for the perfect fillet mignon, paella or mum's chocolate sponge cake. This oversimplification of practice to a recipe list of tasks that describe nursing practice just like the metaphor, also explains why nursing care is not identical and there are variations in practice and outcomes[7]. Just as the act of making a cake is embodied knowledge tacitly understood as practical knowledge, so too are the experiences of nurses and nursing practice embodied knowledge tacitly understood, practical knowledge (O'Connor 2007, p. 126). It is the nature of this complexity and hybridity in their everyday context that is the focus of this research through observation and questioning of nurses as they undertake these practices.

Theoretical framework

Though the focus of my data collection was nurse's infection control practices, these practices became the vehicle of inquiring into nursing practice more generally. Adding to Latimer [my emphasis in italics], I contend that:

> Nurses' *practice* is precisely local and specific, not standardised *as it is specific to each patient*, and nursing can be many things: hesitant, incomplete, decisive, objective, subjective, concerned with dirt, the science and technology *of disease, illness, intensive care and infection control*, with the heroic and the mundane *acts of ICU*, with *critically ill* bodies and with emotion and with thinking *about me, the*

[6] A cookbook approach to infection control might be thought of as taking one cup of quality management and two cups of effective work practices mix it together with a generous amount of basic infection control, and you have expert infection control practices and no transmission of infectious agents.

[7] The cookbook metaphor suggests that making mum's chocolate sponge cake or paella will warrant perfection or exemplary results each and every time. However in cooking, one day's result can be different to the next: a little too much here, or not quite enough, or the oven being too hot means that mum's chocolate sponge resembles an erupting Mount Vesuvius or an ancient lunar sea.

> *individual, the patient, the unit, the organisation and the profession*…it is a hybrid which occupies a peculiar space, the in-between.

This statement suggests nursing practice can be subjective and also objective, concerned with dirt, science, the heroic and mundane. To explore these practices required a theoretical mindset. Fetterman suggests that 'theory is a guide to practice; no study, ethnographic or otherwise, can be conducted without an underlying theory or model' (1989, p. 15). Though, under positivism and empiricism it is suggested that researchers enter research projects to discover what is 'out there' without influence, realistically, researchers enter the field with some assumptions, theories or hypothesis that needs to be tested or explained.

The specific theoretical background that informs this inquiry is concerned with understanding infection control practices as object, subject and abject practices. It follows what Latimer suggests, that is, we need to understand how nurses practice infection control through more than mere scientific and technological understanding.[8] Rather, understanding infection control as a *practice* is to also understand the mundane and the heroic, how rules[9] are used and followed, how individuals work within systems and rules[10] and how clean and dirty things', generate borders and boundaries[11], so that collectively nurses can provide daily nursing practices.

Clean and dirty

The dominant means of looking at infection control practices has been through the lens of microbiology. This, however, only assists in the understanding of the

[8] For the purpose of this thesis I will not be disregarding the mainstream view of medico-scientific knowledge of infection control practice rather using them as part of the ethnographic data which shapes the practice—see methodology section.
[9] That is object knowledge and practices
[10] That is subjective knowledge and practices
[11] That is abject knowledge and practices.

microscopic organisms that are responsible for disease and illness.[12] Douglas, the well-known anthropologist, in her work on dirt and taboo states:

> that our idea of dirt is dominated by the knowledge of pathogenic organisms. The bacterial transmission of disease was a great nineteenth century discovery. It produced the most radical revolution in the history of medicine. So much has it transformed our lives that it is difficult to think of dirt except in the context of pathogenicity. (Douglas 2002, p. 36)

This radical revolution, as Douglas suggests, has dominated how disease, dirt and pathogens are understood in medicine, science, and for that matter nursing practices. She argues that it is difficult to think of dirt except in relation to pathogens, germs, bacteria, viruses and so forth. Douglas goes on to say that dirt is more than just about pathogens, Lock (2002) causes me to question if infection control as a practice is more than a set of practices shaped by dominant techno-scientific discourse.

Douglas (2002) and Freud (1908) have argued that dirt is matter out of place. Take the physical properties of dirt, say for instance dirt that has come from the field and we have walked dirt onto the carpet or indoors. Dirt in this instance is matter out of place. Dirt in the 'field' is not out of place on a farm, on an archaeological dig or around the foundations of a construction site. Dirt, when defined as matter out of place, disturbs the idea that it can be contained by tidiness and cleanliness. The carpet is no longer aesthetically pleasing, it lacks order and it is contaminated by soil. Moreover, it is possible that this lack of order, with matter out of place, conjures up concerns of disease and contamination (Kubie 1937, pp. 391–392).

Curtis and Biran add to this by saying:

> Knowing than an object has been in contact with disgusting substances renders it disgusting. The dirty bathroom may suggest splashes of bodily fluids, the clothes that have been worn and the used sheets may have soaked up secretions, and half-eaten foot leftovers are suspected of having been in contact with saliva. In the

[12]When bacteria are discussed often the focus is on disease causing agents. The human body has a symbiotic relationship with bacteria which assist in such bodily processes as adjusting the pH of the skin mantle or the cellulose breakdown in our intestines.

> Netherlands one respondent, a librarian described how she sprayed disinfectant on books returned by a "dirty old man". (Curtis & Biran 2001, p. 25)

Hence, dirt is not only matter out of place but matter that disgusts as well. While Curtis and Biran may argue that all cultures have evolved to defend our immune systems by keeping away from things that are dirty and disgusting (2001), Miller in *The anatomy of disgust* (1998) argues that this feeling of disgust or repugnance is invariably linked to particular objects that represent danger, pollution or contamination that have social, cultural and even political meaning to them (1998, pp. 8–9). Miller goes on to say that this feeling of disgust is linked to social mores of how to appropriately display this disgust and that this is attributed to the social, political and cultural values of the object (1998, p. 9). Similarly, Kubie argues that the feeling of disgust operates:

> as though this reaction in and of itself was enough to settle the question of whether something was or was not dirty, and as though there were no unconscious fantasies to be disentangled from whatever reality may warrant the feeling. (1937, p. 389)

However, this properly felt and displayed emotion fits in more with the idea that dirt is also equally about hygiene and aesthetics and not just pathogenicity that Douglas purports revolutionised how *contemporary* society understood dirt. Douglas perceives a difference between primitive and contemporary cultures. She suggested that primitive cultures link ideas of dirt and disgust to merely religious significance and those more contemporary cultures refer to dirt and disgust through the lens of science, medicine and technology. This, however, would assume that just because our modern understanding of dirt is shaped by our microbiological knowledge through the microscope and that our understanding of what is dirty is clearer. However, using the binary system of science, dirty is the categorical opposite of clean. It is the binary categorisation of science that locates matter to be out of place: that is clean and dirty, hygienic and unhygienic, and with it the symbolism of holiness (or purity) versus impurity.

It is the meaning within an organisation's cultures that demonstrate the meaning of objects such as dirt which constitute some objects and practices as hygienic or not (Hamilton 2013). It is how individuals and therefore to a greater extent how our culture develops symbols which represent the meaning-making and shared values within a culture. Laporte suggests:

> pattern of repetition and revival helps us better understand the oscillations of civilization's anal imaginary: that occupies the site of disgust as one moment in history is not necessarily disgusting at the preceding moment or the subsequent one. (Laporte 2002, p. 32)

So things that are dirty and disgusting are historically bound. Laporte gives the example that faeces in some cultures are not used as fertiliser and in certain cultures urine was used to cleanse drapes and clothes, and that in particular cultures it is socially acceptable to spit, urinate and defecate in the street, while in others such actions are frowned upon.

History also shows that hygiene is socially and historically created. Foucault (1991) suggests that with Bentham's panopticon and the newly enforced controls and order, suddenly prisoners were instructed to wash their face and hands as an order. Thus, hygiene became a matter of order and control. L'Hommes machine was concerned with coercion and supervision of a process, rather than any concern with its results. This contrasts with Descartes' view of the body as empirical, calculated and controlled, as intelligible and able to be corrected. That is capable of perfection. However the opposite of the controlled body is the docile body.

Bentham's panopticon and L'Hommes machine were methods of controlling people by controlling potential danger as well. Miller suggests that disgust has a 'strong sense of aversion to something perceived as dangerous because of its powers to contaminate, infect or pollute by proximity, contact or ingestion' (1998, p. 2). This idea of danger further develops the idea that dirt perceived as matter out of place in

relation to pathogens, and designates all dirt and all pathogens made by the body as defiled, contaminated or disgusting. Kubie (1937) describes a hierarchy of dirt in which the bodily processes and function are graded and discriminated from cleanest to dirtiest. Kubie's hierarchy is based on four assumptions. These include softness and wetness, (old) age, pigmentation and bodily prominence. For instance, take Sontag's description of tuberculosis (TB) that fits Kubie's hierarchy of dirt, 'TB is disintegration, febrilization, dematerilization; it is a disease of liquids—the body turning to phlegm and mucus and sputum and, finally, blood—and of air, of the need for better air'[13] (Sontag 2002, p. 14). Kubie went on to say that the 'the body itself creates dirt, and is in fact a kind of animated, mobile dirt factory, exuding filth at every aperture, and that all that is necessary to turn something into dirt is that it should even momentarily enter the body through one of these apertures' (Kubie 1937, p. 391). Indeed, Kubie (1937) suggests humans are mobile dirt factories.

However, it should be noted that this is an alternative view. The contemporary view of the human body is as a healthy, enclosed, intact body, free of disease and infirmity or what Dubos refers to as the 'mirage of health' (Dubos 2001). The reality is, however, that humans live in a symbiotic relationship with microbes. Microbes assist in providing the correct pH mantle on our skin (Jones, Brashers & Huether 2011, pp. 437–438); they assist in cellulose digestion in the large bowel and change the odour of flatus and faeces to a more pleasant odour (though many of us would argue the veracity of this argument when detecting malodours) and even assist in the production of vitamins B and K (Brashers 2011, p. 798). In understanding the body it is necessary to not only explore what makes it dirty by the things that leave it—albeit wet, soft, pigmented, or from the hidden parts—but also through the things that

[13]The perspective of bacteria and infections has not always been negative. Sontag points out there were romanticised view of TB which existed in the aristocracy which demonstrated a particular image of aristocratic life.

happen to the body that make it disorderly and disgusting. Lawton suggests that dirty and disgusting things are rarely ever discussed or covered in professional or even media accounts of hospital care. Lawton suggests that these dirty things are 'glossed over' they are discussed briefly or symptoms are 'controlled' so as not to focus on those dirty parts of patients and practice (Lawton 1998, p. 139). Lawton goes on to say 'returning to Douglas's argument that "dirt" offends against "order", it thus becomes evident that contemporary hospices serve to remove patients' dirt, and the patient *as* dirt, from mainstream society' (1998, p. 138). Dirt, Douglas claims, is taboo and yet the dirt that is in question is actually the patient's normal skin, mucus, blood, urine and faeces. It is only when these objects are defined as matter out of place that impurity and concerns of taboo arise. It is the stuff of life (defined as impure) that offends mainstream society requiring as it does that such objects be hidden. When such objects are made visible this then evokes such strong responses that then they are viewed as out of place. This becomes how infection is thought about, controlled and categorised.

Fear of contamination

The way that dirt and disgust are often talked about in media and literature becomes a consideration through an associated risk of contamination. Fear of dirtiness or contamination may not be only our own fear, but fears that are projected onto us by those around us, such as members of our family. McCann's (1997) study of staff willingness to provide care of HIV/AIDS patients described one participant refusing to work with a HIV/AIDS patient because of 'her husband's views'. McCann also cited how a North American study (Bredfeldt et al. 1991) found that 40% of general practitioners (GPs) believed they would lose patients if it became known that they were treating HIV/AIDS patients. This study, however, did not report on whether these fears were theirs or what clients had conveyed to them of their safety.

Abel's article on the tuberculosis program in New York states:

> Reflecting cultural anxieties about contamination, middle class observers associated tuberculosis with the bodies of poor people, especially immigrants. For their part, the clients may have been overeager to dismiss symptoms. It also is possible that some people who acknowledged that their symptoms might indicate tuberculosis evaded diagnosis because they feared the social consequences. (1997, p. 1811).

Just as Lawton saw hospice care as a means of glossing over, ignoring and categorising dirt and disgust, middle-class New Yorkers classified a particular condition as being linked with a particular class of people. This makes an assumption that the lower classes whom were more likely to be imprisoned were also more likely to be classified as contaminated. Yet a condition like TB is not a consequence of class. Such ordering, Foucault (1991) suggests, comes from panoptic practices where matter out of place requires ordering and dividing practices. Just as Bentham's panopticon enabled the warden to view every prisoner at all times, ordering practice to obtain separations between clean and dirty, purity and contamination, enabled a metaphorical spatial separation.

Isolation practices

Historically, matter that is categorised as out of place, whether it be an infectious disease or the 'insane', are categorisations that were used to sort and subject participants to forms of control such as the use of isolation to ensure boundaries. As an example of such operations, Foucault described the plague-stricken town, separated, set apart and immobilised. The rules of the plague demonstrate how isolating those who were contagious ensures these people can be ideally controlled—isolated, however reduced in form (1991, p. 205). The use of asylums for the insane, as well as the notion of contagion, is widely reported in history as ways of isolating from us that which we fear (Garner 1996; Louw & Swatz 2001; Jones & Rapley 2001). In the United States, isolation of infectious diseases began in the 1870s (Garner 1996) and included conditions such as tuberculosis (Abel 1997). In

Australia, isolation hospitals existed well into the 1970s and 80s for the management of leprosy (Australian Bureau of Statistics [ABS] 1972, p. 441, ABS 1980, p. 237).

Isolation is an experience felt by everyone at some point in their lives. It may be physical, emotional, social, spiritual or cultural. In Pharris' study of nursing partnerships with adolescents convicted of murder (2002) the sense of isolation and separation was experienced by all the participants, both before and after they committed an act of murder. People who undergo bone marrow or organ transplant experienced isolation. Thain and Gibbons' (1996) study found their participants described protective isolation as 'prison' and this despite understanding the reasoning behind the protective isolation. It was described as 'claustrophobic, bearable by the presence of other', stressful and 'I just couldn't wait to get out, I thought, I'll have to get out of there or I'll crack up completely' (1996). Wilson et al. (2009) stated that during stem cell therapy patients':

> sense of dislocation and aloneness was heightened by the need to keep the transplant recipient isolated from potential infections. Because of the high-dose conditioning regimen, recipients were at risk for life-threatening infections and required protective isolation. (2009, p. E18)

Whereas Quested described the world created by stem cell transplantation as 'shrunk to create a clean and contagion free area' (2010, p. 124).

This experience of isolation for those undergoing stem cell therapies arises because people whose immune systems are compromised benefit from the limitations that protective isolation potentially brings. It is also argued that protective isolation was well tolerated by patients and families and 'was less expensive than the cost of a prolonged hospital stay and antimicrobial agents' (Slota et al. 2001). Such explanations give a sense that patients need to put up with the experience as the benefits outweigh the costs. Furthermore, Slota and colleagues assert that 'if interventions reduce risk for health care providers and prevent nosocomial infections

for patients, there are multiple benefits' (2001). However, it could be argued that in managing patients from a safety perspective, using non-pharmaceutical products where possible and implementing protective isolation is less risky and more cost-effective and that this must be better for the patient and the hospital budget. However, what Slota and colleagues fail to recognise in their analysis are the experiences of staff and patients which they may consider are difficult to reconcile with such benefits.

The experience felt by those in protective isolation are not dissimilar to those patients who are isolated to protect the rest of society being exposed to an infectious agent, rather than just themselves. In the case of additional precautions, it is the patient who is infected and requires isolation (seemingly) to protect everyone else. Clearly, isolation is a somewhat ambiguous term when it comes to infection control. The literature does not make clear whether it is the act of separating the patient or if it is the isolation room plus the additional precautions that get put into place for infected patients that bring results. Literature reports on the successful minimisation of the spread of infection through the act of isolation, additional precautions or isolation together with additional precautions (Kretzner & Larson 1998; Safdar et al 2006; Ferguson 2007). Weber et al. reported in their one-year study of overall compliance with isolation precautions (isolation room plus protective attire) to be 60–75% (2007, p. 358) and that compliance varied between type of isolation precautions required. Airborne compliance was 61.5% compared to droplet compliance of 100%. Slota and colleagues (2001) found in their study that infection rates were reduced which was attributed to the use of strict handwashing or alternatively using strict handwashing with the addition of gowns and gloves. They suggest that reduction of infection rates was related to improved infection control understanding and the prominence of signs around the unit reminding staff to wash their hands. They suggest that hand hygiene

could be a more cost-effective means of controlling transmission when compared to additional precautions and the use of an isolation room (2001). Cooper et al. (2004) found that it was plausible that the success of isolation techniques could be attributed to other factors and cite 'methodological weakness and inadequate reporting of research' (2004, p. 6). Despite this Cooper and colleagues draw the conclusion that regardless of the lack of conclusive findings they believed there was enough evidence to continue with the use of isolation (2004).

In understanding staff and patient experiences, Morgan and colleagues' literature review of contact precautions found that barrier restrictions, source isolation, contact isolation and contact precautions were terms used interchangeably that represented the same activities (2009, p. 86). The review found that patients with contact precautions and therefore isolated were less likely to see their health care worker, had more delays in care, higher numbers of adverse events with greater levels of anxiety and depression (Morgan et al. 2009). McCann (1997) found that isolation presents itself to health care workers as a situation of danger, signifying an undesirable and marginalised group. The binary between self and other, isolated and free, strengthens the belief that these patients represent danger, adding social isolation as well to the situation.

Despite the magnitude of literature on contact precautions, additional precautions and isolation, the practice remains an ambiguous one as experienced by nurses. Take the following account of isolation described as:

> one means by which society protects itself from those who would do it harm. Antisocial people are isolated in prison; infected people are isolated in hospital. The degree of isolation may vary between close confinement and an open prison, but whatever the degree of isolation, it is at best an unsettling experience for the person concerned … At one extreme an often irrational fear demands total isolation of the infected person, using methods which are at best of uncertain value, e.g. a suspected case of pulmonary tuberculosis screened from the ward and surrounded by a clutter of gowns hung on drip stands, laundry skip, rubbish bin, bedpan, wash bowls, crockery and cutlery soaking in hypochlorite, and a definite worry about the

> infection risk attached to the charts hung on the bed. At the other extreme, there is almost sublime indifference to the germ theory of disease, e.g. the infected wound following colonic surgery is not really an infection because it is autogenous; therefore any wound isolation precautions are superfluous, irrespective of organisms isolated. Between these extremes lies a wealth of conjecture, guesswork, misinformation and fear of feeling foolish, most often allied to a caring, concerned attitude. (Ayliffe et al. 1990, p. 61)

While it should be noted that this quote is now 23 years old some things are unchanged. The 'clutter' of hospital equipment such as bedpans and drips stands together with domestic items of crockery and cutlery, as Ayliffe and colleagues describes, is still there. In some venues there may no longer be the drip stand of gowns, rather a coat hook and sign encouraging the correct way to hang gowns (see Appendix 1), and there is still the clutter of equipment designated for MRSA or isolation use only. The hypochlorite solution may have disappeared only to be a replaced by another similar solution. Often the food trays continue to be left in bays or just outside, as 'clean' catering staff do not know if they can enter these areas, leaving the question unanswered as to whether a tray can be returned to the kitchen, or whether the tray is either clean or dirty.

Ayliffe et al. also suggest the technique of isolating someone from society is associated with a range of behaviours that are believed to assist in managing the spread of infection. Take the patient's clinical notes or 'charts', which are handled by a variety of people:

> It is therefore often assumed that they (the charts) present a greater infection hazard than is in fact the case. Charts are usually clean and dry, and therefore unlikely to support survival of pathogens. There is some logic in keeping them outside the room since this discourages quick visits to the room, possibly leading to a break in isolation techniques. (Ayliffe et al. 1990, p. 69)

The emphasis on such discussion is not whether the charts are infectious or not. The charts represent a question of where infectious matter could be and that everything in the isolation room is infectious, demonstrating the ambiguity associated with isolation rooms. Questions arise such as what things in the isolation room are clean or dirty once the patient is no longer infected or colonised? This can be argued both

ways. Is it not about good practice? If hands are washed prior to a procedure and before doing any documentation then the notes would not be contaminated, irrespective of where such notes are located. Moreover, if the charts are clean and dry do they harbour sufficient numbers of infectious agent to be of epidemiological concern? From this it can be asserted that isolation is a technique used to protect society from what is determined as dangerous; the insane, the incarcerated and contagious.

Practice as object

When providing an account of infection control practices it is difficult to imagine practice without the *objects of practice*: that is how the physical surrounds the patient and of course the bacterium, virus—the germ that has invaded the patient's flesh—and constitutes the corresponding environment. Hence, the object is central to these practices where infection control objects are privileged over the subject of practice (Van der Riet 1997, p. 99). Privileging the objective knowledge of infection control practice focuses on the theoretical assumptions about perceptions of risk, hazards and rules.

When reviewing the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) a reader cannot go far without questioning the meaning of risk. What are hazards and what are risks? These guidelines state that:

> A hazard in a health care setting is defined as an agent (biological, chemical or physical) that has the potential to cause harm to people or the environment. In infection control, a hazard is either an infectious agent or a mechanism that allows the transmission of an infectious agent (e.g. invasive device). (2004, section 3.1)

The guidelines then go on to say that the 'purpose of risk management/control is to minimise people's exposure to sources of infection, including blood or body fluids' (DHA 2004, section 3.1). The current method of understanding risk is to make an

assessment based on logic and one that can be mapped through a direct relationship to the hazard. A hazard is defined as the potential to do harm (Fox 1999), which in the case of infection control is an infectious agent. Fox cites the example of HIV risk factors in relation to the health care field working with sharps and bodily fluids. In comparison, risk of HIV in the community is related to hazardous social practices such as unprotected sexual intercourse and intravenous drug use. Risk of contracting HIV in this instance produces an image that risk-taking behaviour is attributed to promiscuous or amoral behaviours. Fox also suggests that 'power and access to and control of knowledge thus become paramount in a risk society' (1999, p. 13). Risk is currently contextualised as a negative aspect of life. Risk is also conceived of inert objects that are characterised into hazards by the likelihood of an event.

Beck's perspective of risk is much deeper, that is 'risk may be defined as a systematic way of dealing with hazards and insecurities induced and introduced by modernisation itself' (1992, p. 21). Though considered calculable and rational, risks are also subjective. Dean sees risk as a different means of 'ordering reality, of rendering it into a calculable form' (1999, p. 131). Beck suggests that risk relies on speculative assumptions about risk. In so doing risk is seen as absolute, quantifiable, ethical and possible. Therefore use of this knowledge, risk becomes manageable. Beck (1992, p. 21) notes that prior to industrialisation the word risk demonstrated 'bravery and adventure', whereas he now sees risks as redefined by the twinned activities of globalisation and industrialisation.

In comparison to today's society, Beck suggests that in the pre-industrialised world people did not have risk as their needs were simpler. Beck believes that the social production of meaning of risk as requiring management relates to the concept of safety or rather being unsafe. This lack of safety he suggests can be attributed to the production of wealth (1992, p. 19). Campbell and Currie disagree with Beck's

conceptualisation of risk as they argue that risk is dependent on two factors, probability and harm (2006, p. 150). Campbell and Currie's argument therefore suggests that people without wealth and prior to industrialisation would still have dangers and that there would be a likelihood of these dangers producing harm, therefore risk is still present in the pre-industrialised world and more weight being ascribed to wealth.

However for Foucault the plagues provided another way of creating the possibility of a political utopia. That is, risk of contracting the plague brought about control, power, and law making rights and bringing order. Foucault states:

> These are "people of little substance who carry the sick, bury the dead, clean and do many vile and abject offices". It is a segmented immobile, frozen space. Each individual is fixed in his place and if he moves he does so at the risk of his life, contagion or punishment. (Foucault 1991, p. 195)

In this account, through the writings of the military and men of substance the plague became controlled. Out of the disorder of the plague, a hierarchy and order was created. Though there are similarities in history with lepers, Foucault suggest that the plague brought discipline for the wider society, while in comparison for the lepers it brought exile, separation and confinement. However, in history, lepers also represented beggars, vagabonds, the mentally ill and the disorderly. The plague demonstrated how authorities could bring about control, demonstrating how risk is constructed is a social process as much as about containment of the infected (Douglas & Wildavsky 1982, p. 6).

Renn (1992) describes seven types or classifications of the calculation of risk: actuarial approach, toxicological/epidemiological approach, probabilistic risk analysis, economics of risk, psychology of risk, social theories of risk and cultural theories of risk. Douglas, in her essay on risk and justice, states 'it may be a general trait of human society that fear of danger tends to strengthen the lines of division in a

community' (1996, p. 34) where risk is the subject of fear or vice versa. She also goes on to describe how individualistic societies discriminate more than hierarchical systems. In modern hierarchies and modern political systems it is the marginalised groups such as the infirm, disabled and the elderly that suffer such status.

Moreover, risk underpins everything in a contemporary society. In a risk society such as ours, where the notion of risk and danger already exist, what is important is that risk is politicised (Douglas 1996, p. 29). This politicisation is about proper ascription of blame. Douglas goes on to say that 'blaming is a way of manning the gates through which all information has to pass' (1996, p. 19). Moreover, this manning the gates is a means of understanding the symbolism embedded in risk. In such a situation, dangers and hazards such as infectious agents are inevitable and it is my contention that how health 'man's its gates' and assigns blame that is of greatest significance. The understanding of the symbolism represented in manning the gates and control enables a better understanding of infection control as a practice.

The abject

So far this thesis has explored the theoretical understandings of infection control practices that have been informed by dirt, disgust and fear. These explanations of practice offer polarising positions: personalised and subjective, or alternatively empirical, theoretical and objective views of these practices. Dirty and clean, orderly and disorderly, risk and rules continue to provide clear binary explanations and reductionist approaches to this subject matter.

In my previous study of nursing care of the patient who required additional precautions, the practical understanding between clean and dirty, purity and contamination demonstrated the ambiguity and uncertainty of these two binaries:

> You assume that you are "clean" and that your practice is good but you then touch something that your assume is clean and then scratch your nose and walk into another bay—are you then still clean? What can we really assume in this business as far as infection control is concerned? Must we assume that everything is contaminated and nothing is clean? (Roderick 2010, p. 243)

This account from the participant Elle, a registered nurse, describes the ambiguity between clean and dirty. Her questioning 'can you still be clean' or must 'everything be contaminated' speaks to the defilement, horror and abjection that is felt when boundaries between what previously seemed distinct which now have become blurred and its borders an object (Kristeva 1982, p. 4). Though bacteria or infectious agents[14] are made known through science and medicine (through the use of microscopes) this cannot be the only aspect that informs how people work *with* a patient because to the naked eye, the very objects that shape the practice are invisible. The very objects used to create order such as the isolation bay, the personal protective equipment such as gloves and gowns, do not assist in creating a clear ordering. In this previous study I went on to say:

> Here we see from the examples from the participants that the scientific classification system of organising disease and in particular pathogens requiring isolation is an ambiguous system. The orderly lines of the binary nature of science do not assist nurses to practice; they cannot visualise what is invisible. The identification of what would be considered clean and what is considered dirty or contaminated is indistinct, in-between and does not respect the borders that have been created by the use of additional precautions: the plastic aprons, the gloves, or the handwashing. (Roderick 2010, p. 244)

Infection and infection control practices are governed by the very objects that create them, infectious agents. The gaze through the microscope seemingly has brought order through the operations of science to the uncertainty such pathogens symbolised. This science informs guidelines, rules and facts and in doing so attempts to create order where there is uncertainty because of the presence of infection.

[14] Note the change in language from bacterium to infectious agent. Bacterium is the correct scientific term for microscopic organisms such as *Staphylococcus aureus* and *Pseudomonas aeruginosa*. I have used infectious agent more generally to include bacteria, viruses, fungi and parasites and to signify that all these microscopic organisms have the potential to be infectious.

Infection and infection control is also subject to the human questioning of these unseen microscopic organisms by the person, the nurse, interacting with this dimension. The human body is not absent when providing care but rather is the product of the oscillations between the object world and the subject world.[15] This oscillation is played out through abjection. Kristeva states:

> It is thus not lack of cleanliness or health that causes abjection but what disturbs identity, system, order. What does not respect borders, positions, rules. The in-between, the ambiguous. (Kristeva 1982, p. 4)

The lack of clear boundaries between what is clean and unclean is the intersection between objectivity and subjection, abjection. In the case of patient care it is not necessarily the presence of infectious agents that causes the abjection but rather the lack of clear boundaries and the ambiguity created when symbolic borders of clean and dirty, non-infectious space and isolation space/room become object (Kristeva 1982). It is the lack of clear boundaries and the associated disrespect of the scientific borders and systems of order that create the abjection.

Infectious agent's become organised and made orderly through this categorisation and therefore such infections and dirt become controlled. The abject becomes evident as the very things that are used to control an infection, that is the additional precautions, inevitably create more confusion. By infection control practices being conceived as being 'additional precautions' that are seen as making infection control separate from nursing practice rather than certain and separating it from nursing practice rather than seeing it embedded in nursing practice. This confusion is created in the recognition that creating orders is not achieved through objects along, such as gowns, gloves, separate room or even the nurse. I[16] the 'nurse' am also part of this process of creating order too. How 'I' the nurses become ordered is through the

[15] By the subject world I am not simply referring to the socialised body.
[16] The term 'I' is used in this context to represent nurses as individuals

knowledge of rules, risk, infectious agents and dirtiness which is an embodied phenomenon (Cregan 2006, p. 96). Oliver (1993) suggests that:

> Kristeva looks to the borders of subjectivity in order to demonstrate that we are all subjects-in-process…We must learn to live within the flexible, always precarious borders of our subjectivity in order to learn to live within the flexible, always precarious borders of human society. (1993, p. 14)

Hence, borders between clean and dirty, risk and rules demonstrate the binary, but it is within abjection that nurses learn to work, so that they can live within the flexibility of human society as Oliver suggests.

Abjection is also that which offends; Kristeva provides an opportunity to understand, maybe even explain, that which interrupts, inhabits, the in-between spaces of nursing. By this I mean historically and rhetorically nursing is represented as orderly care, ruled through science and regulation boards under the banner of care. Infection control guidelines are used to regulate and organise this care thereby creating order. Holmes et al suggests

> But the social (as well as the professional) constructions of nurses, in a way, forbid the verbalisation of emotions such as disgust and repulsion. The caring nurse is supposed to be able to sublimate these negative feelings in order to maintain ethical standards, but behind the appearance of tolerance and calm… the abject. (2010, p. 233)

Holmes and colleagues (2010) suggests that the construction of nursing is such that as a professional group we are not socialised to verbalise our emotions about how nursing makes us feel. In this example the term disgust and repulsion is used to demonstrate abjection. For Holmes et al disgust and repulsion represented the abject, of how systems of order had been disturbed.

Holmes et al (2010) point is further illustrated by Lawton (1998), Rudge (1998) and Gardner (1998) who describe abjection or disgust as a sensual experience; in the sense that wherever disgusts occur there is a breaching of boundaries, an assault on the senses. However, the abject is more than merely emotion, it inhabits a space in-

between. Where skin is normally outside and our soft fleshy and viscous parts are hidden by skin, in the case of abjection bodies become porous and leaking from loss of skin through burns, wounds or ulcerous cancers (Lawton 1998; Rudge 1998). It is accepted that people also have control of their bodily functions, such as defecating, and yet Lawton (1998) and Gardner's (1998) studies found bodies that leak odour from fulminating tumours or faecal incontinence are also abject. It is my contention that the management of infectious agents deemed to be highly infectious and requiring additional precautions elicits the same effects. Similarly, I feel that resistant infections elicit the same level of disgust, with nothing sensual to induce disgust except what can be imagined. The infectious agents that elicit this response are invisible. Exploring the notion of infectiousness as abject enables what Randolph believes is a 'plenitude of understanding that is necessary for the practice of nursing to meeting the ethical dilemmas of a changing world' (2010, p. xvi). By this I understand Randolph to be suggesting that abjection causes a questioning of accepted doxa and orthodoxy around infection control practices and policies. The orthodox understanding of infection control practices has enabled a medical and scientific domination of control and prevention of infection without seeing the human side of this debate.

The final point that I wish to make regarding the theoretical framework and the assumptions that I bring to this doctoral study is in reference to women's work. Nursing work is dirty work and many parts of the work are domestic in nature (Huppartz 2009). Domestic and dirty work has traditionally been done by women, usually of lower socioeconomic status. Statistically, the notion that nursing work being women's work is supported by the Australian Institute of Health and Wellness (AIHW 2012) census data, which demonstrates in 2011 that 90.1% of the nursing workforce was female. This being the case, such a feminised workforce and work

suggests a fit with Kristeva's (1982) notion of the feminine *chora*. My point is to argue against the notion that body work is automatically domestic work and therefore women's work. My central aim is to show how this body work is valuable because it has infection control and its practices embedded in the everyday work and hence of great importance.

Actual infection control and nursing practice requires capturing. Stories need to be told that capture the real, problematic and unsanitised accounts of nursing practice. Street suggests:

> Nurses tell compelling stories of their nursing experiences. Yet when faced with the opportunity to record their stories as a basis for reflection, most nurses feel overwhelmed by the recording process. (1991, p. 5)

Because of this, the actual stories of nursing practice have remained untold, especially when these stories seem to be tales of domestic work. The idea that these tales of domestic feminine work could be valued is, as Street suggests, becomes overwhelming.

Aims of the research

The broad aim of the research was to explore what nurses do as they go about their normal everyday work that is, nursing practice. Given that nursing practice is embodied practice and often rendered invisible and basic I approached the project to achieve the following objectives:

- To record accounts of nurses' everyday practices as they go about their routine care of a patient in intensive care
- To record accounts of nurses' everyday practices as they provide care for a patient categorised as infectious

- To explore what nurses consider to be infection control practices and nursing practice

- To interpret these practices within a context of nursing practice rather than only within a positivist paradigm.

Outline of the thesis

It has been my experience that infection control practices have been asserted as simply the following of rules in the form of guidelines, policy and protocols. Yet, infectious agents are invisible and therefore hidden from view. It is my contention that our understanding of infection control practices and how they fit within everyday nursing practices should become visible and the meaning of our nursing practices should be made known. I have argued that the exploration of these practices must go beyond the techno-scientific realm. Moreover, infection control practices and for that matter nursing practices cannot simply be uncovered using traditional scientific and quantitative approaches; rather these practices must be understood in the embodied accounts that they represent. As such, the theoretical underpinnings of infection control practices (as accounts of practice) were influenced by the works of Douglas, Miller, Curtis, and Biran, framing these practices within a continuum of clean and dirty.

However, the strictly binary nature of terms such as aseptic and septic, clean and dirty, sterile and contaminated is less certain in the practice setting. This dichotomous relationship that science addresses, that influence infection control as practices, become blurred at the bedside. Practice is not simply subjects following object rules. These practices or dispositions are a culmination of the subject and object knowledge's, they are in-between. This is where the work of Kristeva heavily influences the theoretical description of practice leading to uncovering how practice

can be understood as abject; that is, practices that can be between object and subject, that practices can be disgusting and disturb order, logic and rules. It is my argument that Kristeva (1982) proffers an opportunity to understand and maybe even explain that which interrupts and inhabits the in-between spaces of nursing.

In many disciplines the writing of a thesis consists of commonly worded chapter headings which represent an accepted order to the presentation of original works (Oliver 2004). In keeping with ethnographies anthropological roots I depart from the "traditional thesis presentation" and present anthropological story which commenced in this chapter with a background to understanding infection control as a practice.

In Chapter Two, in recognition of nursing thesis tradition I have a discernible methodology section to this thesis. In this chapter I justify and describe the methodological framework, the use of ethnography to explore nursing practices in an ICU. This methodology is heavily influenced by Bourdieu and his notion of *sens pratique* or feel for the game. By this I explore the concept of the researcher's responsibility of capturing the participants' accounts of everyday practice. Though ethnography can use a raft of methods, it typically uses participant observation. In Chapter Two I argue for the use of participant observation, interview and textual analysis as a method of uncovering nursing practice.

Chapter Three through to Chapter Seven are data or findings chapters and what is common to all is the blending of accounts of practice (data) as description, analysis and discussion. Each of the chapters provides rich exemplars of data together with the literature, the theoretical underpinning, description, analysis and discussion. This thesis deliberately does not include a traditional literature review *chapter* rather the literature is wrapped around the data which both informs how data "emerges" and how the literature is used to inform interpretation of analysis and discussion. This

style also embeds to decision making trail as part of the process of exploring the accounts of practice. Too often decision making trails are implied in research however some research provides very little clarity as to how researchers arrive at the end point. Therefore chapters three through to seven are a direct result of the researcher's troubling the literature or theory and taking the reader through the process.

In Chapter Three, I explore the mundane everyday practices of routine nursing work in the ICU. Central to this chapter is the description and analysis of what is often suggested as the simple yet hidden work of nurses in the context of ICU. Hidden because these practices are performed within a backdrop of increased patient acuity and technological dominance compared to ward based work, where there are traditionally lower levels of patient acuity and technology. This story of routine infection control as a practice begins with a single account of care performed by the nurse Karen to her patient Nicole. In the tradition of anthropological story the account of practice is both descriptive and interpretative. The exemplar of practice is then unpacked which leads to the accounts of nurses regarding their definitions of infection control.

To further explore this point of everyday accounts Chapter Four, demonstrates that infection control is embedded in everyday practice. Infection control is 'done to patient by nurses' while nursing practice takes place. In looking at the routine care of the patient, in the act of personal hygiene, this act is often regarded as mundane and yet there are a variety of nurses' knowledge embedded in this simple act. In Chapter Four, hygiene is described through unpacking the layers of forms of practice and the knowledge that guides them. Such analyses are rarely identified, spoken about, valued or even considered to be part of the broader infection control and prevention practices.

In Chapter Five, I move the discussion away from the patient to the nurses as they provide routine infection control care. This chapter again explores routine care but moves from the theoretical reasons for providing care and balances this with what this care means in terms of personal infection control. Where Chapters Three and Four are very much about how infection control is hidden and embedded in practices of simple everyday care, in this chapter the focus is on the nurses' accounts of care.

Chapter Six moves the discussion of the findings away from routine care and looks at the infectious patient. Chapters Three, Four and Five all represent the context of the patient being labelled 'normal' or not infectious and where infection control practices are often not referenced and become hidden. Chapter Six specifically focuses on patients and their care when they are deemed infectious. This includes the care of the patient who is known to be infectious from a multiresistant organism. What is discovered are practices that are similar but different, That is the infectious patient's intensive care management was no different to any other patient in the intensive care unit; nevertheless, they were considered to be infectious and therefore isolated from the normal non-infectious patient. ICU care continued, however, practices appeared different as staff attempted to control these infectious agents which was less certain due to not being unable to see or know where it was.

The final data chapter, Chapter Seven, comprises this intersection between the clean non-infectious world of the ICU with the dirty and less certain world of the infectious space. Through the classification of the infectious patient I found these accounts of nursing practice as abject. Abjection, in this instance refers to Kristeva's boundary work rather than her psychoanalytical as a means of explaining and disrupting the notion of basic care as either subject or object, but rather as abject. This abjection is found where the clear lines of patient care and boundaries become obscured, blurred and in-between. This chapter describes how nursing practice is

between the objectified way of understanding the world of the infectious patient and the blurred area where the infectiousness of the patient is no longer of concern.

In Chapter Eight, I summarise the thesis and show how few have problematised infection control in this way. The methodology, together with the theoretical underpinning for this research, enables the actual lived accounts of infection control to be explored in the rich grounds of ICU. The knowledge embedded in practice moves away from the non-compliant and blaming culture currently found in infection control practices and moves towards an exploring of ambiguities and opportunities. In conclusion, I pose potential recommendations for nursing practice and further research.

CHAPTER TWO: METHODOLOGY

Introduction

As stated in my previous chapter, hybridity is a characteristic of nursing practice and its investigation required a methodology that could explore nurses' hidden, personal and actual accounts. Historically, infection control as a practice has been explored using quantitative methods. Where qualitative techniques such as observation and interviews have been used they have been framed within the traditional empirical approaches such as counting of observations (Gould 2004; Lausten et al. 2009; Mitchell et al. 2013). Though a valid form of knowing, my argument is that empirical studies continue to replicate the findings of previous studies in ascertaining the compliance with infection control techniques or infection rates. These studies also attempt to narrow and reduce the object of study to singular aspects of practice, without understanding infection control within an account of practice. Lawler argues regarding scientific-positivistic inquiry:

> While many nursing issues lend themselves to quantification, measurement and positivist enquiry, such approaches do not encapsulate the whole story, or what one might regard as the things which really matter to the people in question. (Lawler 1991, p. 35)

I wanted to explore the human aspect of these practices, encouraged by the way that dirt as matter out of place could be thought through in the theoretical approaches outlined there. I did not wish the study to be used to support a culture of blame as to why nurses did or did not do certain procedures or tasks. As mentioned earlier, I wanted to explore nursing practice for what it 'is', rather than trying to fit with infection control dogma.

The rules and regimens that govern practices around infection control are about controlling the body, the infected or infectious body (patient and staff) as an object that then becomes subject to controls. Certainly in clinical practice it is argued that

these governing practices, or rather adherence to these governing practices, should be logical. However, Bourdieu states:

> Practice has a logic which is not that of the logician. This has to be acknowledged in order to avoid asking of it more logic than it can give thereby condemning oneself either to wring incoherence's out of it or to thrust a forced coherence upon it. (1990a, p. 86)

Simply making these objects of disgust and control fit was not going to enable an understanding of these nursing practices, because the logic has to be exposed at the same time as its particular situations.

A methodology was therefore required that enabled the very objects of practice, that is infection control and nursing practices, to be explored in the context where they take place. Such an exposition of practice was to study contextually enriched accounts of practice that described what nursing practice is. This study became an ethnography in a contemporary health care setting. To the general public and even within academics circles the term ethnography causes great confusion. A direct translation from Greek refers to *ethnos* meaning nation and *graphia* meaning writing. Literally, ethnography has come to mean writing about a nation, a people or a group.

What kind of ethnography?

Ethnography offers many ways to understand a group. Some would label ethnography as materialistic versus ideational (Fetterman 1989), naturalism versus realism (Hammersley & Atkinson 2007). Alternatively, its aims are seen to fit with other theoretical perspectives such as symbolic interactionism, structural functionalism, sociology or anthropology (Edwards 1995, p. 28). Ethnography can also be categorised as contemporary or critical (Edwards 1995; Alvesson & Skoldberg 2000; Kincheloe & McLaren 2000).

In legitimising the nursing voice I recognised that the methodological underpinnings of this study are influenced by the disciplines of sociology and anthropology.

Individual interpretations of these disciplines create blurred boundaries and mixed genres. As ethnography places value on practice and products of research it is important to explore their philosophical assumptions. It is of importance to note that each of these theoretical assumptions about the nature of ethnographic research also provides insights into the methods used in this methodology. This will be covered in more detail later in the methods section of this chapter.

The first assumption about ethnography is that ethnographic studies are about culture (Patton 2002, p. 81). From an anthropological tradition, this culture meant exploring and understanding distant lands, primitive, sub-continental or island cultures (Mead 1972; Douglas 2002). In more recent times these cultural studies have continued this tradition, which Vidich and Lyman (2000) suggests resulted in 'Othering' ethnographies such as the indigenous, underdeveloped and the civic other. Today, culture provides a much broader picture that can include exploration of workplaces (Dodier & Camus 2002; Hutchins & Clausen 2002), health care (Lawler 1991; Rudge 1998; Bloor 2002) and also the work of Evans (2006), who has broken from the tradition of exoticising the 'other'. Though traditional ethnographies looked at cultural ethnography and the understanding of 'other', my understanding of this 'culture' is more from the cultural–social capital perspective of Bourdieu. Irrespective of the nature or location of the research, what is considered central to the work of ethnography is the study of culture.

Secondly, following the assumption of culture is the centring of the native's point of view. It is a widely held belief that ethnography is the study of cultures from the 'natives' view point' (Edwards 1995, p. 29). This singular concept of the native's viewpoint is fraught with hidden assumptions, depending on the theoretical and methodological paradigm wherein ethnography positions itself. Taylor (2002) describes ethnographic research as the ways of obtaining the insider's worldview of

their society, rather than the typical abstract outsider's view obtained by scientists. But it is more than that, as the insider's view can only be represented by the insider's words. Ethnographic study presents the insider's view paralleled with the outsider's perspective of the participant's world. 'Any account of a research project is also an interpretation rather than an objective description' (Taylor 2002, p. 4). With this interpretation comes the challenge of negotiating the insider and outsider perspectives. Angrosino and May de Perez (2000) propose that objective truth about society and culture is a fallacy as there is always going to be people who disagree with the way the that things happened. Spradley and McCurdy suggest ethnography is 'not merely an objective description of people and their behaviour from the observer's viewpoint. It is a *systematic attempt* to *discover the knowledge* a group of people have learned and are using to organise their behaviour' (my emphasis in italics) (Spradley & McCurdy 1972, p. 9). Bourdieu furthers this argument by stating 'the sociologist must never ignore that the specific characteristic of her point of view is to be a point of view on a point of view' (1996, p. 34).

This point is both a troubling of the notion of native and insider, and also raises the question of what is considered as rigour. Rigour, as Bourdieu (1996, p. 33) would suggest acknowledges the potential to privilege the researcher's position in understanding the research participant while maintaining an attitude that is open to questioning the taken for granted world of the participant. In my case it is a means of understanding the nurse's knowledge that counts as nursing practice around infection control practices, while also understanding the privileging of my own position as both outsider (to the organisation) and insider (I share common understanding, training, socialisation to nursing and ICU and governance because I am a nurse).

The third assumption relates to contextuality and the natural setting. This is a troubling notion in two ways. Firstly, ethnography takes place in the field in the

'natural setting', which has not been fabricated by the researcher in a laboratory or through role play. Data collection is about understanding people in their own 'territory' (de Laine 1997, p. 23). Hammersley and Atkinson imply that researchers should 'adopt an attitude of respect or appreciation towards the social world' (2007, pp. 995–996). In understanding this territory the researcher enters the field respecting and appreciating the social world of their participants. Secondly, contextuality is also about the respect the researcher has for the data collected. Data collection in this instance is not simply collecting facts (what the participant said and did); it has to include some examination of how such data is affected by its environment, that is, the field.

The fourth assumption regarding ethnography is its use of the idea of 'thick description'. The term 'thick description' came to being from Gilbert Ryle, but was made notable to ethnography by cultural anthropologist, Clifford Geertz. Geertz uses Ryle's analogy of a twitch versus a wink (2000, p. 6). Fetterman (1989) also explores this analogy as wink versus blink and suggests that without the thick description of the context as to why someone might twitch, blink or wink then this event remains only able to be interpreted as simply an eye movement. However, with the description of what takes place in and around this movement of the eye then greater understanding is gained through such thick description. These deep, descriptive accounts of what happens in the field provide the context of the field and shape the cultural understandings made possible (Spradley & McCurdy 1972; Fetterman 1989; Hammersley & Atkinson 2007). Geertz goes on to state:

> What the ethnographer is in fact faced with—except when (as, of course, he must do) he is pursuing the more automatized routines of data collection—is a multiplicity of complex conceptual structures, many of them superimposed upon or knotted into one another, which are at once strange, irregular and inexplicit, and which must contrive somehow first to grasp and then to render. (2000, p. 10)

In the context of this study, Bourdieu is used to pull these assumptions together to create a methodology enabling rich contextual accounts of nursing practice. Such a move is couched in what Webb, Schirato and Danaher describe as Bourdieu's work/desire to take account of the practical dimension of everyday life, unlike his structuralist anthropologist colleagues who dominated French anthropology in the 1960s (2002, p. 2). To Bourdieu, ethnography was a means of explaining the relationship between people's practices (also known as bodily practices) with *when and how* these practices occur (Webb, Schirato & Danaher 2002, p. 21).

Bourdieu's *habitus* offers a solution for the paradoxes described in the preceding pages (1990a, p. 62). For Bourdieu, habitus is the entanglement of the social, cultural and physical by which we know ourselves and are known (Cregan 2006, p. 69). Cregan goes on to state that habitus for Bourdieu is made up of the complexity of 'the social conditions and space we inhabit and embody' (2006, p. 78). This social condition is influenced by what Bourdieu referred to as capital (symbolic, social, cultural and economic).

Lewandowski suggests that Bourdieu's theory of practice aims:

> to show how the context-sensitive character of social action cannot be captured in either subjectivist or objectivist frameworks, but instead must be understood as something like context specific *sens pratique* or a context-sensitive "feel for the game. (2000, p. 50)

This feel for the game or field enables the object–abject–subject practices of nurses in their everyday field to be understood in the context of everyday practices that occur at the bedside.

This feel for the game is both a question of ontology (what is the game) and epistemology (ways of knowing—how we know the game) in response to both the subjects of research as object, but also the object of the research being the subjective.

Research process

Ethnography uses a range of methods to explore the phenomenon under study, characteristically referred to as fieldwork. This means working with people under study over long periods of time in the natural environment (Fetterman 1989, p. 41). Ethnography as a method typically consists of participant observation of people in their everyday context, which includes interview, and collection of data from documents (Hammersley & Atkinson 2007). Empirically, field work is often criticised due to its 'unstructured' approach to participants. However, participant observation techniques are valued in social science for their orientation towards 'exploration', a process of clarifying hunches, questions and problems of which evidence is collected and interpreted against (Hammersley & Atkinson 2007).

Participant observation and ethical considerations

Observation can be quite simply referred to as 'immersion into the culture' (Fetterman 1989, p. 9). Dewalt and Dewalt (2002, p. 9) assert that participant observation is an important method of data collection, as it is enables the embodied cultural meaning and exploration of the non-verbal communication with others to guide data collection as well as interpretation. Observation can be classified in many ways according to the level of participation in the field of research. These include complete participation, moderate participation, passive participation and the complete observer (Angrosino & Mays de Perez 2000). In this study I took on the role of passive observer: a low level of participation in the field with mainly observation taking place.

There are a number of reasons for taking this approach to observation. In terms of nursing, surveillance of personnel, and for that matter, the flow of care is monitored by time sheets, allocation of roles and patients and also the nursing progress notes and patient charts that provide evidence that a nurse was involved in the management

of the patient. In doing this research there was no means of providing a legitimate account of my participation in the patients' care. I never showed up on a roster, time sheet, allocation for a shift or in the patient's notes. So in terms of participation in patient care, and therefore nursing, care it was to do simple assistive tasks such as getting additional linen.

Observation took place for periods up to two hours, twice a day, three to four times per week. There were variations in the frequency and length of time observation took place, depending on what was happening in the unit. The nine months of data collection[17] was also influenced by my own maternity leave, parental and work-related responsibilities, so data observation took place Tuesday through to Friday with some weekend data collection from November 2004 to 2006.

Broadly speaking, nursing patients in ICU can vary intensely from continuously manipulating inotropic medications, to documenting evidence, to performing care and procedures on a patient. ICU is also about constant observation. To the outside world it must look like a nurse is just sitting and doing nothing, but in reality the nurse is observing the patient, the monitor, the ventilator, the patient's response to therapy. Then again, the nurse's observation of the patient is also interspersed with doing things, such as manipulating the infusion, checking and changing parameters. A critically ill patient may require constant attention. In my experience, it is often a complaint of ICU nurses that their workload had been 'quiet' and it was almost like a superstition—and was only ever whispered. The ICU-kind-of-nurse is often someone who enjoys the constant busy, ever-changing and technically challenging environment that critically ill patients create.

[17] It is not part of ethnographic practice to provide detail of exact number or total hours in the field

This was something I had to grapple with as a researcher. Though I was used to the observing of the patient when providing patient care, I was less familiar with observing the nurse. As a senior ICU nurse who coordinated or managed the day (the shift) I would observe or look at the bigger picture. This included observing very specific events in ICU for teaching purposes, for junior nurses or less experienced staff; planning and projecting staffing numbers for the next shift based on patient acuity; and finally, looking at the availability of everything from medications and dressing packs to what linen was required. To focus only on the nurse and the patient for no other reason than to provide an account of what nursing practice took place was a very new experience. This meant that sometimes observation was ceased earlier than expected due to the routine nature of a stable ICU patient who required no intervention; the monitoring of the patient so routine. The patient is almost in a state of suspended animation—too ill to be woken from the drug-induced coma or to leave the intensive care, but too stable to require intervention. Sometimes you would see nurses reading notes, magazines, text books, restocking the various trolleys to fill the time between charting and the very routine nature of caring for stable ICU patients. Healing takes time.

Positioning myself in the area also varied depending on the nurse and patient being observed. Nurses with whom I had built a trusting relationship often enabled me to sit within the 'bay area', often at the end of the bed, next to the observation chart. This trusting relationship often followed through to developing trust and a relationship with the awake patient who was the subject of observation. If they saw a nurse welcoming me into the bay, or the non-verbal body language, then they were more inclined to spontaneously invite me to observe procedures that happened behind the curtains, such as pressure area care and wound care. Nurses would often spontaneously introduce me to the patient's visitors.

Other nurses and patients required me to take a more distant approach to observation. I would often ask the nurse or the patient where they would like me to sit. I would sometimes find myself sitting along the back wall of the bay next to a sink or in the access corridors next to the bay (please refer to the floor plan of a typical bay as found Figure 2.1) or even in the vacant bay next to the patient. In these cases, as I was very much on the periphery, I would often have to ask permission to enter into the bay to observe nursing practice that took place behind the closed screen.

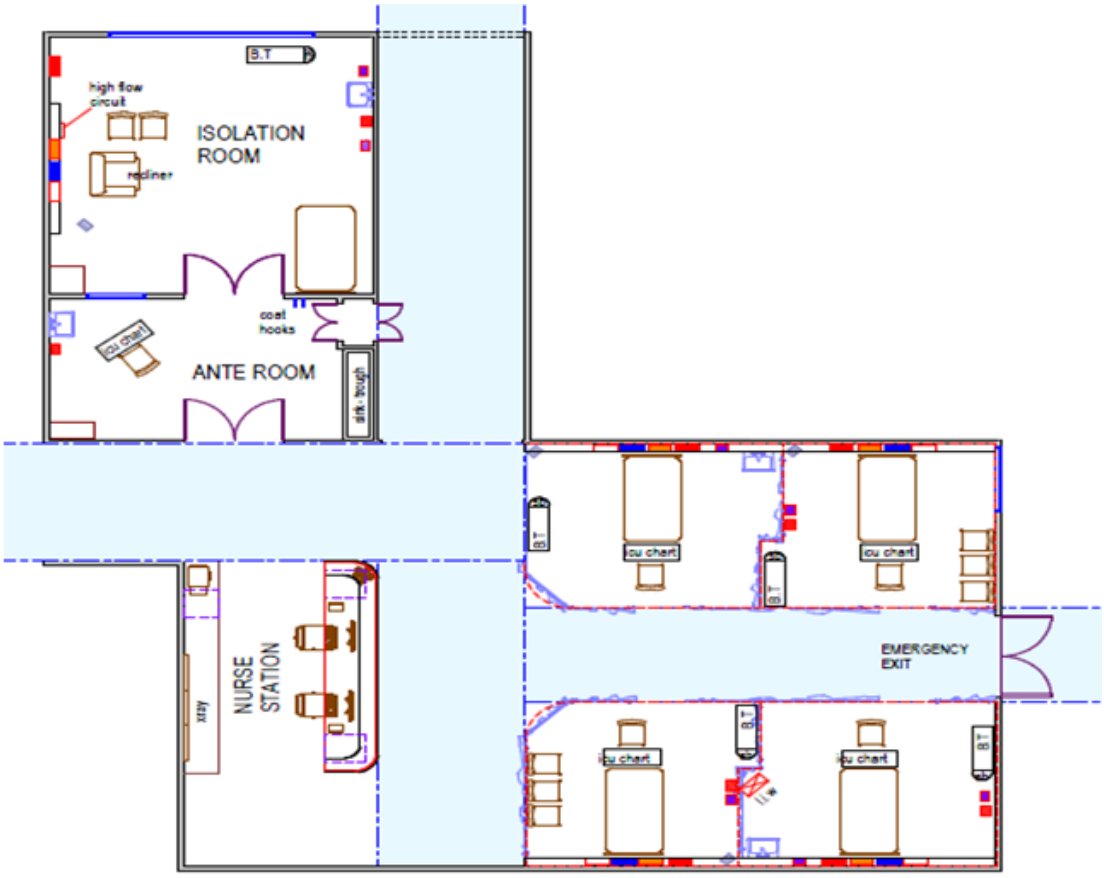

Figure 2.1: Floor plan of a typical 4-bed bay and the isolation room[18]

In addition to observing nurses as they performed routine care of patients I also followed the infection control team as they went about their normal daily work and how that intersected with the daily work of the intensive care nurse. This often took me throughout the hospital to meetings with other nursing staff, medical staff, education sessions, infection control campaigns and simple maintenance—such as

[18] Please refer to the enlarged floor plan found in Appendix 4 for more detail

the replacement of new hand steriliser, where I would push the trolley of supplies and distribute alcohol-based hand gel to the infection control team.

From the earliest examples of ethnography from sociology and anthropology there has always been great fear and trepidation regarding going 'native'. As explained in the ethnographic assumptions section, this can be interpreted as not getting too close to the participant, trying to present participants' perspectives and not just my own 'abstract' views. However, I also understand that I cannot provide a 'pure' objective account of the situation; I was making an interpretation of what has taken place, I was not value-neutral. I press this point from the perspective of ethics and rigour. In building rapport and trust with my participants I was valuing their contribution to my study, therefore their perspective. This, however, is a double-edged sword. As Taylor (1995) suggests, understanding implies knowledge or awareness and goes on to state 'understanding is always against a background of what is taken for granted, just relied on' (1995, p. 167). There are many things in ICU that I take for granted because of my years of experience in ICU nursing. In achieving rigour I had to continuously question my own interpretations and motivations when looking at the data and handling it. I continuously had trouble with this notion as I would often get confused stares from my participants when I would ask questions about practice—because as an ICU nurse I should not need that explained. But it also enabled greater trust as I was seen as 'one of them'. For instance, during observation one of the patients awoke from their drug-induced coma suddenly and attempted to remove their own endotracheal tube (ET). My instinctive reaction was to prevent this happening by preventing the patients from pulling out their endotracheal tube. This not only prevented harm to the patient but also this built trust and recognition, I was considered 'safe' to have around.

Interviewing

Interviewing is not simply a matter of asking participant's questions and recording their answers. Theoretically, there are two positions that have to be understood about interviewing—these are the 'what' and 'how' questions; 'what is an interview' and 'how do you interview' (Fontana & Frey 2000).

Often an interview is thought of as face-to-face verbal encounters. Interviewing is any kind of exchange, in these modern times an interview is not necessarily face-to-face. Interviews are often seen as structured or unstructured. Structured interviews are often favoured by positivist researchers and ask all participants the same questions (i.e. a proforma of questions regarding the research material), as the name suggests everything is structured—from the explanation of the research to the words used, the questions asked and even the responses the researcher makes, and this obtains precise responses to questions. Miller and Glassner, however, reflect that:

> the creation of the "pure" interview—enacted in a sterilized context, in such a way that is comes as possible to providing a 'mirror reflection' of the reality that exist in the social world. (1997, p. 99)

However, unstructured interviews do not necessarily mean ad hoc. Unstructured interviews enable the participant to take the interviewer on their own personal journey of understanding about the research. Allowed to take their own journey, participants enable researchers to uncover accounts that may not have been explored had the researcher kept to a strict and structured proforma of questions. Due to the ethical requirement of the institution, interviews were only conducted among those nurses and the infection control team who had consented. However, my interviews were much more structured as the two groups under study were the ICU nurses and the infection control team. In the 'how' of interviewing there is also a belief that formal interviews should take place. It was my intention to formalise interviews, to take participants to a location of their choice at a time of their choice and record

interviews and then transcribe them verbatim. Unfortunately, this did not always happen. Interviews took place in keeping with anthropological tradition in a range of venues from formal structured interviews to talking on the run[19] while things were happening. Thirty nurses in ICU were interviewed while observations took place, during meal breaks, following staff as they left the ward or got supplies. The formal interviews that were audio recorded took place after work, in lunch and afternoon tea breaks, and then transcribed verbatim.

Observation was the most favoured and easy form of collecting data from the nurses in the study because it did not encroach on any more of their time. Nurses were providing patient care irrespective of whether I observed or not. However, interviews took participants out of their comfort zones both in terms of time and going on the record (recording verbatim). It was my early assumption that people would wish to participate in the project and be interviewed about their nursing practice. Though the majority of nurses were very enthusiastic about being observed and the nature of the project, this did not extend to being interviewed. There was a reluctance to give time and words, whether this has to do with time being precious, shifts always being busy, nurses working to the last minute or beyond to complete care. Or perhaps it had more to do with not wanting to speak out about practice; to be identified albeit, with a pseudonym, with practice that might be considered poor, controversial or different to what policy suggests.

The majority of interviews were therefore conversations. After each period of observation I would discuss with the participants about what had taken place. Formal

[19] The researcher was cognisant of not interrupting practice when interviewing on the run. Many times I did not ask any questions rather waited for the participant to open the conversation up which then became my opportunity to ask further questions about practice. Some nurses never 'opened up' even when asked questions. I also was very aware not to impact on staff's personal time or breach occupational health and safety legislation during scheduled breaks. Only two final interviews were conducted during afternoon tea and both staff members were allowed by management to take their regular tea break following the interview.

interviews were conducted in a location and place of the participant's choosing, were semi-structured, digitally recorded and transcribed verbatim and were not conducted with all of the nurses observed. Where possible, participants were given their transcripts. Fontana and Frey identify ten directives with regards to interview, which included: accessing the setting, understanding the language and culture, interviewer presentation, locating informants, gaining trust and rapport.

Though I can appreciate the formality and necessity that Fontana and Frey identified, I do feel that the due to the nature of ethnographic research in this setting—after months of immersing myself in ICU gaining trust, accessing the setting, locating participants and then building a rapport together with being well known as a nurse—all ten directives were unnecessary in this case. Some authors argue that even interviewer presentation is an important part of conducting interviews; this was more of an issue during observation about which little is spoken of in sociological and anthropological circles. There is talk about dressing like the natives; however, this was not possible for me, particularly in a hospital institution. Wearing uniform would look like I was working as a registered nurse on duty, this would create role conflict among participants, patients, visitors and another health professionals. Hass and Shaffir state that uniforms are a 'cloak of competence' and that uniforms speak in that they create title, ownerships and familiarity (1987, pp. 70–71). Uniforms are a form of social order. Nurses and midwives, allied health and patient services such as ward clerks and orderlies wear uniforms. Medical staff do not, which in itself demonstrates hierarchy. In my case I chose to wear civilian clothes, however, I would always wear an identity badge labelled 'Researcher'. My rationale for doing this was that I did not wish to be mistaken as a paid employee of Capital Hospital and, just as family and friends visited the unit in civilian clothing, I also visited the unit and sat and observed as they did.

Documents and artefacts

Documents such as staff communiqués, policies, procedures, signs and posters add to the body of knowledge about nursing practice. I was also invited and became involved in ward meetings, education sessions, as well as special interest groups. I was also invited to the infection control morning tea, an informal yet routine meeting every Tuesday. This medical dominated group was run by consultants, directors and doctors involved in infection control planning and implementation in Capital Hospital. Nurses from the infection control team and the occupational medicine team also participated in this informal, yet very important meeting.

Edwards (1995) takes on a much broader approach to the topic of artefacts. Edwards suggest 'professional socialisation is influenced by the environment in which it takes place and the theoretical setting, which are further structured by artefacts such as uniforms, language and organisational hierarchy' (1995 p. 810). I also collected literature that influenced nursing practice in the area of infection control such as newspaper clippings, discussions in the tea room and in professional journal articles. The reflexive nature of ethnography required that I also noted the mood and events of the ward that constituted the context of the project.

Data collection

The research setting

In this section I outline how ethnography was done in the context of studying nurses as they worked with patients in the intensive care unit at Capital Hospital. For the family and friends of the patients in ICU, the ICU represents a place of trauma and grief. A place families and friends come to terms with the serious illness of their loved one. Whether planned or unplanned, within the walls of ICU there is joy, hope and sorrow. But ICU is also a place of work. For the majority of my nursing career I have worked within ICU. I had initially commenced my research project in a large

metropolitan ICU where I had previously spent many years working as a senior registered nurse. The initial study was to explore nurses' infection control practices when caring for a patient who required additional precautions due to a microbiological agent that was deemed infectious. The setting was familiar; many of the staff were still present from when I had previously worked there. There was definitely a familiarity, like worn slippers, with this environment but this ultimately made data collection difficult. Things changed, however, when my employment situation altered and I then relocated to another capital city in Australia. I realised the process of trying to explore the meaning of nurses' infection control practices in an environment where people, places and procedures were familiar to me would have been too difficult at this stage of my research career.

This perception was especially true when, during data collection, staff would look at me strangely when I asked questions that they thought I should obviously know the answer. Whether real or imagined it reflected the difficulty that I was having. However, this was an opportunity from a false start to be clearer about the purpose of my study. The initial purpose of the study was to explore nursing practice provided for a patient who was 'deemed' infectious. From my previous study, nurses had reported feeling like the dirty nurse when caring for these patients. From my own experience as a registered nurse in many hospitals in Australia and London, there could be few or many infectious patients on any given day. Statistically, infection rates are represented in a number of ways by the Australian Council of Healthcare Standards (ACHS 2012a & b). Statistics include numbers of infections, such as wound infections following hip replacement or CVC insertion. The number of infectious patients is represented in the number of MRSA cases in the hospital. The latest statistics demonstrate that the average number of infectious patients in hospital

represents 1.3 per 10,000 bed days compared to 5.3 per 10,000 bed days in ICU[20] (ACHS 2012a, pp. 54–55). The practices of nurses who cared for infectious patients are therefore not the norm, or necessarily the everyday, but rather the visible aspects of what are everyday practices of infection control.

A new location meant a new opportunity to broaden the scope of this study. Capital Hospital was a major teaching hospital for medicine and nursing. Patients ranged from paediatric to maternity, mental health, medical and surgical suites, emergency and theatre departments. It was well serviced with outpatients, radiology, pathology and their own infectious disease department. Another reason for also changing my focus in the project to routine care was that Capital Hospital ICU claimed that they did not get many patients who were deemed as infectious. The setting of the research was thus Capital Hospital ICU, where the 22-bed ICU was a relatively new facility having recently been renovated and refurbished. The ICU was located *centre stage* with the emergency department and theatre in close proximity. The hospital had the capacity to take approximately 500 patients and clinical areas were located in two wings either side of the ICU.

The physical layout of the ICU is only part of the setting where the research took place. I viewed the ICU as representing spaces that appeared to coincide and collide throughout the course of the day. These spaces fitting within the biomedical model of objectivity and subjectivity were physical spaces (objects such as size of the room, the equipment and even the number of people in the location) and they were also emotional spaces (subjective) made up of the patients, health professionals, nurses and visitors. These subjective spaces were influenced by the senses: noise, light, movement, smell and, to a lesser extent, taste.

[20] These statistics are in relation to MRSA rates in non-sterile sites such as skin.

The ICU patients required care as a result of trauma, medical and surgical conditions. To an outsider the patients appear lifeless, bound to the bed by wires and tubes, surrounded by monitors and machines. Alternatively, patients could appear exhausted, terrified and struggling for life and independence in their shackles of ICU technology, or just waiting. Patients waited; for their visitors to arrive, for the doctor to see them, for lunch or an investigation or simply waiting to leave the ICU to be transferred to a ward to continue their recovery.

Stages of research

Stage One Pilot study

Following institutional approval and individual consent of those present during observation (see Appendix 2 for ethics application, informed consent and letters of approval), I observed nurses as they went about their routine care of a patient. Two periods of two hours of observation were carried out, between the hours of 0700 and 2200[21], three to four times for one month. The pilot study period enabled me to explore the natural setting of the research. This included exploring where was the best location for observation to take place so as to not interrupt routine care and yet enable the experience of nurses to be uncovered.

Stage Two: observation of nurses in ICU

Stage Two continued observation of nurses in ICU. Specifically during these times of observation, attention was given to how nurses incorporate infection control principles into everyday practice. Again, two observation sessions per day of two hours each were conducted three times per week. Observations focused on nursing

[21] The decision was made not to include night duty as part of observation. The primary reason was to minimise disruption to patient sleep patterns by not conducting observation on night duty. To minimise this disruption it would mean that I had limited ability to engage with nursing participants while on night duty due to keeping noise to a minimum. Though there are industrial examples where night shift impacts on practice, the reality of intensive care nursing is that staff to patient ratios are the same on both night and day shift, and patient care is continuous therefore patient care activities are similar irrespective of shift

care and limited information was gathered about the patient. Observations were followed by semi-structured interviews of 30–45 minutes. In the busyness of the ICU this proved very difficult at times. Nursing staff were unable to leave their patients after the period of observations and the competing demands of work, meetings, in-service education and home commitments meant that staff were unable to participate for the planned interview time immediately after the observation. Instead of semi-structured interviews, informal interviews and discussions were obtained after each period of observation. Gathering of observational and interview data were planned to occur over six months, however, due to my maternity and parental leave this took longer and occurred until November 2006.

Stage Three: observation of the infection control team

Stage Three occurred concurrently with Stage Two. During this stage the infection control teams' (in particular the infection control nurse's) role was observed in relation to how nursing practice in ICU was influenced and informed by infection control principles. However, during the pilot stage, it was noted by nurses in ICU and in my own observations that the infection control nurses did not visit the ICU often. Rather the medical team from the infection control department visited the ICU and discussed with the ICU medical team the issues related to the patients. At this point I discussed with the infection control nurses if observation could include their routine rounds of the hospital to understand how they influenced nursing practice more broadly. This included in-service education and instruction, specifically about a patient's condition or infection. This was followed by semi-structured interviews of 20–30 minutes.

Stage Four: document and final interviews

Stage Four specifically looked at literature available to the ICU nurses that informed their nursing practice. This included current education material specific to infection

control practice, policy and procedure manuals, and journal articles that informed practice. During this stage participants already observed were invited to undertake a final interview about observation and infection control practice. This included nurses and members of the infection control team. Interviews took place in a location of the participant's choice and at a time that suited them. Interviews were between 30 and 60 minutes, digitally recorded and transcribed verbatim.

Selection of participants

The design of the study was to provide fairly even distribution of short-term, intermediate and long-term patient care in ICU. A short-term patient was a patient in the unit for less than 24 hours. An intermediate patient was in the unit up to 14 days and a long-term patient was in the unit for more than 14 days. The plan was also to gain an event distribution of times when patients were observed (see sample of schedule of observation Table 2.1).

Table 2.1: Sample of schedule of observations

Schedule of observation according to patient group Day 1																
Group	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
Short-term																
Intermediate																
Long-term																

Schedule of observation according to patient group Day 2																
Group	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
Short-term																
Intermediate																
Long-term																

Schedule of observation according to patient group Day 3																
Group	07	08	09	10	11	1	13	14	15	16	17	18	19	20	21	22
Short-term																
Intermediate																
Long-term																

Schedule of observation according to patient group Day 4																
Group	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
Short-term																
Intermediate																
Long-term																

Schedule of observation according to patient group Day 5																
Group	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
Short-term																
Intermediate																
Long-term																

The pursuit of this even distribution of short-, intermediate and long- term patients was, unfortunately, abandoned for two reasons. Firstly, the length of time taken and the difficulty gaining consent from patients and secondly, the period of time patients were in the unit.

Firstly, institutional ethics required that every patient be consented prior to any observation of nursing care. Because of the nature of ICU many patients were not in a position to consent and therefore required next of kin consent. Due to the strict visiting hours policy in the unit and at the request of the medical team all visitors were required to leave the unit during medical ward round. This meant that there were often large periods of time when there would be no next of kin available for consent and so the process of obtaining consent was often slow and protracted. For

instance, an ideal time to observe nursing care was in the morning when it was often very busy, however, this was also the time when medical ward round occurred and when visitors were absent.

Secondly, short-term patients were often in and out of the ICU within 24 hours. Obtaining consent in this period of time from next of kin was often near impossible; for instance, on many occasions consent was achieved only just prior to discharge. Many of the patients that consented to the study also initially fitted the intermediate category, however, due to complications in their condition became long-term patients in the unit. The nursing care provided to 19 patients in total was observed in the ICU.

Nurses were chosen through stage one, two and four because of their role in providing moment-by-moment care of a patient in ICU. Thirty ICU nurses were observed providing direct care in the ICU. Due to the ethical requirement to first gain consent regarding a patient and the length of time that consent took, nurses were often purposely approached to participate in the periods of observation because patient consent was already achieved. Recruitment of nursing staff was less formal because their recruitment was based on their working with consented patients. Information sheets were provided and their consent recorded. The hospital also had two Clinical Nurse Consultants (CNCs) who were part of the infection control team. These two nurses were also observed in their role as infection control nurses and how they contributed to the understanding of infection control practices in the unit and in the hospital. Of the 32 nursing participants 24 were female and 8 were male. Among these 32 participants, 27 were Registered Nurse Level 1 including one graduate nurse[22], only one nurse in the unit was an Enrolled Nurse (EN). Four had

[22] Registered Nurse level 1 are degree or diploma level nurses. A graduate nurse is a registered nurse who has recently completed their nursing degree and is in the first year of their practice.

management positions as either Clinical Nurses (CN) or Clinical Nurse Consultants (CNC) in ICU and the two CNCs in the infection control team[23] (see Table 2.2).

[23] A condition of ethics approval was that the two nurses involved in the study would not be referred to individually, rather as the infection control team in general.

Table 2.2: Table of nursing participants

	Pseudonym	Gender	Role
1	Karen	Female	RN
2	Hannah	Female	RN
3	Audrey	Female	CNC ICT
4	Philipa	Female	RN
5	Stephanie	Female	CN
6	Lesley	Female	RN
7	Sally	Female	RN
8	Katrina	Female	RN
9	Melanie	Female	RN
10	Georgia	Female	RN
11	Ruth	Female	RN
12	Natalie	Female	RN
13	Bella	Female	Graduate RN
14	Christine	Female	RN
15	Sandy	Female	RN
16	Cassandra	Female	RN
17	Phoebe	Female	RN
18	Mathew	Male	RN
19	Helen	Female	RN
20	Phillip	Male	RN
21	Donna	Female	RN
22	Zoe	Female	RN
23	Bill	Male	RN/research nurse
24	Beatrice	Female	CNC ICU
25	Yosef	Male	RN
26	Caroline	Female	RN pool nurse
27	Gregory	Male	RN
28	Wanda	Female	CN ICU—infection control portfolio
29	Anton	Male	EN OHS representative
30	Shirley	Female	CNC ICT
31	Chris	Male	RN
32	Jeremy	Male	RN

Access and gate keeping

Prior to obtaining ethics approval I was required to obtain an onsite sponsor and formal approval from a range of heads of departments. This included obtaining the approval of the Clinical Nurse Consultant of ICU and the Director of Nursing for the division. I was then required to explain my proposal to the Medical Director of the ICU and obtain their formal approval. The Medical Director was very supportive and interested in the topic of infection control practices in ICU. They did, however, want the focus of my study to be a broader observation of practices and to include both medical and nursing staff in the unit. I explained that the logistics of consenting all for the purpose of observation was difficult and too time-consuming for the purpose of the study. I also reiterated that the focus of my study was nurses and although the Medical Director's points were valid with regard to understanding all health care providers' infection control practices, the scope was too broad for the purpose and timing of this project. Finally, I was required to obtain the Medical Director of the Infection Control Team's approval to observe the nurses in that team. This was a very formal and time-consuming process, one that required continuous effort.

Part of my frustration in this process stemmed from the realisation that to study nurses' behaviour I required medical approval. This stems from the belief that ICU patients 'belong to the intensive care doctors'. What is often unique about ICU is that patients may come into hospitals (particularly public hospitals) under medical and surgical consultants/teams but when they come to ICU they are under the management of the intensive care doctors.

One event that was not realised until late into the study and that delayed access was the electronic security access cards or 'swipe card', as they were referred to. At all of the entrance points to the ICU were large double electronic doors that could only be opened with the use of the electronic security access. This was a form of security and

a means of controlling the access that the public and visitors had to the ICU and to patients. All visitors were required to use a video intercom system, and required to identify themselves and who they were there to visit.

I was also required to use the intercom system and, as with all intercom systems, it requires someone to be at the other end of the system to answer the call, to then find out if the patient could have visitors and then invite the person into the ICU while giving instructions of where they needed to go. The person answering the intercom included permanent staff, relief staff, administrative support and the occasional medical professional. If the intercom was answered by someone unfamiliar with me, or my project, then I was often required to explain myself and my purpose for entering the ICU. The person answering the intercom would then need to find someone who knew who I was, such as the senior nurse who would then permit me to enter the ICU. This process took time, particularly as much of my observation took place during the morning medical round, when the senior nurse was often still assisting with the morning round with the medical team.

I also obtained entry into the unit by entering with health professionals when they were entering or leaving the unit. It was only near to the end of my data collection that someone stated that I was eligible to obtain an electronic access card. This paperwork required the Clinical Nurse Consultant's approval.

Access to the unit and therefore participants was also dominated by quite structured routines in the mornings. There were set visiting hours and medical ward round happened from around 10 am and depending on the number of patients, severity of illness and which consultant was on duty the length of each medical round varied. This did not directly impact my study though as I was only focusing on nursing practice and when 'the round' came to the patient that I was observing I would cease

observation for that period of time. Where these two structures became difficult was when obtaining patient or next of kin consent.

A typical day usually meant I would enter the unit between 8 and 9 am as this was a good time to discuss with awake and self-ventilating patients their involvement in the study. This was because they had recently slept, were less fatigued and more motivated to discuss with a stranger the finer details of the project. This ploy at times worked, but often the patients wished to discuss participation in the study with their next of kin. The morning routine, however, meant that many visitors would not arrive to visit patients until after 'morning round', which may be after 11 am therefore delaying the patient's consent until well after this time. If the however the participant was unconscious or neurologically not in a position to provide informed consent, then I would need to wait until after the morning round, or when visiting hours had commenced. This resulted in much of my planned data collection time waiting and unable to collect data as the process for consent required patient (or next of kin) consent as well as the nurse's consent.

Data management and analysis

As part of the ethical requirement every participant was formally consented. For patient participants a copy of both the consent form and an initialled copy of the information sheet were filed in their medical/health case notes. All staff were given copies of their consent form. The data consisted of digital recordings of interviews that were transcribed verbatim, field note recordings as text, as well as documents such as policy, protocol and literature available to ICU nurses. The data existed as text and a process of thematic analysis was used to identify themes and patterns present. These texts were manually sorted in hard paper form and also stored electronically on my personal hard drive. In addition to these accounts of data were my questions from the data or concerns raised by participants.

All of this data were sorted manually and coded according to situations, activities, meaning and setting. Thematic analysis was loosely based on the Miles and Huberman (1994) method of analysis in that after coding the situations, activities, settings and meaning the data was further sorted to group them in to themes with exemplars and vignettes that demonstrated meaningful examples of the research. Data analysis however is a reflexive process and is as much about me as well as it is about the actual data. Bourdieu and Wacquant describe this as the 'know-how' and state:

> The program of observation and analysis through which it is effected is not a blueprint that you draw up in advance, in the manner of the engineer. It is, rather, a protracted and exacting task that is accomplished little by little, through a whole series of small rectifications and amendments inspired by what is called le metier, the "know-how" that is by the set of practical principles that orients choices at once minute and decisive. (2002, pp. 227-228)

My constant analysis of individual codes, themes and vignettes as individual accounts of data and in the context of the total events ensured vivid and rich data was represented as meaningful finding (Miles and Huberman 1994, p 1).

Disclaimer and concluding remarks

In popular press and movies the ICU environment is believed to be an adrenaline driven exciting place, filled with events that represent life in the balance, such as cardiac arrest, haemorrhages and where a patient's condition can change within a heartbeat. I have been quite deliberate in the kind of data I collected. Firstly, this was a study about nursing. Often when a patient's condition deteriorates the multidisciplinary team, or more specifically nurses and doctors, work closely together to stabilise the patient's health, therefore these are not necessarily just nursing practices that would be observed but rather the multidisciplinary team. Secondly, due to the difficulty obtaining consent I would be required to then bracket certain actions, procedures and conversations that took place during these events by

other members of the multidisciplinary team. During dramatic events such as cardiac arrest, airway obstruction or haemorrhage the merits of scrupulous infection control practices are often hotly contested when the patient could die at any moment. I did not want the study to be a question about a nurse's duty of care to provide emergency care or necessarily about safety in those high acuity moments. This study's focus was on the routine events of intensive care. Like Mesman (2009, p. 1706), I wanted thick descriptions of routine events.

I was also not trying to defend the actions of nurses and doctors during these highly dramatic events; I was trying to understand the everyday practices of nurses. The reality of intensive care is that cardiac arrests or patients dramatically haemorrhaging are the stuff of Hollywood. In reality, only 1.2 in every 1000 patients has a cardiac arrest in ICU (ACHS 2012a, p. 57). I say this not to do a disservice to the many ICU nurses who perform acts of heroism every day. In no way did I wish to paint a picture within these pages that intensive care work is boring nor did I wish to glamorise life and death situations. Rather for these reasons I chose to observe the more routine and mundane, the backbone of the everyday of the ICU nurse. This work is what gets patients from being critical to being well enough to leave the unit. Such routinised care, the meticulous attention to detail and the following of medical regimens are what constitutes the substance of intensive care nurses.

CHAPTER THREE: EVERYDAY INFECTION CONTROL

> The sense a professional body has of itself involves images of history. Participants regularly said there was something 'basic' or 'fundamental' about the practical activities of hygiene. (Brown, Crawford, Nerlich & Koteyko 2008, p. 1052)

> The search for health—that is to say, the recovery of Man's natural state of immortality—imposes certain burden not only upon society and its supreme incarnations, the government, but upon each of us as individuals. (Dalrymple 1998, p. 12)

In this chapter I will illustrate how infection control happens in the everyday practices of the ICU nurses in this study. As outlined in Chapter One, these 'actual practices' of infection control are provided in day-to-day care in the 'liminal space' in-between policy and practice. The policy in this case is the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) and argues that 'standard precautions are work practices required to achieve a basic level of infection control and are recommended for the treatment and care of all patients' (DHA 2004, section 2.1). This includes work practices such as aseptic technique, personal hygiene, personal protective equipment, appropriate handling of sharps, equipment management, environmental controls and support to laundry and food services. This space as seen in the narrative that follows is a nursing and infection control space. It is a space where practice and policy meet. As nursing practice does not occur in a vacuum, it is my contention that actual practices appear as hybrids though the layering of dynamic and static knowledge, all of which contribute to what counts as nursing practice. The accounts that follow demonstrate how standard precautions practice look when caring for a patient.

Shared world of Nicole and Karen

In exploring the space of infection control practices I begin by drawing attention to an everyday occurrence in intensive care units. What follows is an activity or a task of nursing that is not unique to intensive care nursing, yet is particular to this patient

and this nurse at a crucial stage of patient care. It is my contention in this thesis that though many of the accounts of care are not unique they can, however, focus the attention on the many factors that contribute to patient care, providing a detailed picture of the multifaceted nature of the work of everyday nursing care.

During data collection I gathered very little demographic data on the patient participants. Data on the patients generally related to their diagnosis or reason for admission to the ICU. During observation, the focus of my attention was on the objects in and around patient participants, which enabled the field where care took place to be known and understood. The following instance is an account of the nursing care of the patient Nicole as provided by Karen.[24]

> *Today ICU feels busy. There are 6 ventilated patients, 8 high dependency patients, 5 patients are expected to be transferred out of ICU and 2 patients are due to arrive. It's 11.30 and the morning medical round[25] is still in progress. Nicole had been admitted to ICU from one of the wards just two days ago with sepsis of unknown origin, possibly a UTI or infected diverticulum. She was initially managed on her arrival to ICU with CPAP[26] but her respiratory function deteriorated and she was intubated yesterday at 10 am.*
>
> *Today Nicole is being cared for by Karen, the bay is a blur with activity as Nicole is unstable. Currently, Nicole is unconscious due to sedation to enable the artificial life support or the mechanical ventilator (SIMV PC18[27]) to function. Her kidneys have failed and she is on a dialysis machine continuously. As a consequence of this machine a side effect is that her body is being actively cooled, therefore requiring her to be rewarmed with a special warming blanket[28] that completely covers her body and only her head and wrist[29] is visible. The blue ICU trolley is cluttered with three boxes of gloves, medications, dialysis fluids, dialysis orders, the CPAP mask from prior to her intubation (which happened at 10 am yesterday), a sterile IDC, waterless handwash system (both Hand Rub and Hand gel). The trolley also*

[24] Karen was a registered nurse with 3 years postgraduate experience. She was young, in her mid-20s. She was currently completing her ICU certificate.
[25] Medical round refers to a medical discussion about the patient, their diagnosis, prognosis and plan of care.
[26] CPAP a tight fitting facial mask that assist patients to breathe on their own.
[27] This SIMV PC 18 refers to a type of ventilation mode on a ventilator/artificial life support.
[28] A warming blanket is a device that blows warmed air through a specially designed fabric that actively warms the patient.
[29] Her head and wrist are the only parts of her body visible as part of the continuous surveillance that occurs. Her head is visible to see the endotracheal tube, which is connected to the mechanical ventilator and her wrist is visible due to the arterial line that is inserted to continuously monitor her blood pressure and for frequent and accurate testing and measuring of blood for things such as oxygen level in her blood. The arterial line is always visible due to the risk of the patient bleeding profusely if the cannula was dislodged.

has Karen's drink bottle, a jug for measuring cardiac outputs, syringes, tissues, cup and spoon from prior to intubation, and medications from the ward. Nicole is constantly monitored and other than being attached to the ventilator, monitor and the dialysis machine she also is attached to nine infusion pumps delivering medications to improve her cardiac output and blood pressure[30], medication to keep Nicole sedated[31] to enable the artificial breathing to occur through the ventilator and other medications.[32] Despite all this activity Karen makes time to "do a back wash".

Karen organises an orderly and another nurse [33] to assist with the back wash. Adjusting an infusion, Karen provides a small bolus of sedation to keep Nicole settled while the staff can roll her over to enable her to have her back washed. Taking charge Karen counts 1… 2… 3 and together the nurse and the orderly roll Nicole over onto her side. The orderly holds Nicole's body on her side while the other nurse supports Nicole's head and the endotracheal tube in position, the orderly and the nurse both wear gloves. Karen pulls back the sheets exposing Nicole's naked body. Karen moves quickly between dialysis, ventilator and the bed. Nicole is unstable, so everyone's eyes are on the monitor. The monitor "bongs and beeps" loudly. Quickly applying gloves Karen, removes the pillows that have been under Nicole's back and buttocks and begins washing and places them at the end of the Nicole's bed. While doing so Karen constantly looks up at the monitor and then back to Nicole. Smoothing out the sheets she wipes Nicole down with a towel, working her way down from shoulders to buttocks. Again she smooths out the sheets, Karen now moves over to the other side of the patient where the orderly is holding Nicole on her side and begins adjusting the pumps, as she does she is constantly checking the monitor. Silencing the alarms with a touch of a button she returns to the other side, as she does the assisting nurse discusses the unstable blood pressure. As they talk about the blood pressure they motion to put Nicole back onto her back and without words, counting or movement Nicole's body is returned to the bed so that she now lies flat in the bed. Adjusting her wrist watch Karen lets the orderly know that he can now leave. Grabbing the pillows that she had thrown on to the end of the bed she throws them on the floor and adjusts the top sheet, making them neat and ensuring that Nicole's naked body is completely covered. (From field notes)[34]

Initially, many could argue that the above account of Karen and Nicole is indeed not an account of infection control at all. Infection control is typically thought of in relation to wound dressings, aseptic technique, invasive procedures and the use of personal protective attire such as gowns, masks or gloves that are so typically seen in media in relation to infection control practices.

[30] Medications to improve the patient's cardiac output and blood pressure belong to a family of drugs called inotropes, they include such medications as adrenaline, vasopressin and dobutamine.
[31] It was a common procedure to sedate patients with medication such as morphine and midazolam.
[32] Medications included drugs such as N-acetylcysteine and heparin infusions.
[33] Airway support means that the nurse holds the tube and or alternatively monitors the endotracheal tube while turning takes place. The artificial airway created by the breathing tube is not permanent. The breathing tube is held in position by cotton tape that ties the tube to the patient's face. These tubes can be dislodged or moved from simple movement (Gardner et al. 2005; Cuthbertson & Kelly 2007).
[34] The entire account of this care can be found in the Appendix 3

What are infection control practices?

In this account of care there was no opportunity to explore Karen's understanding of the infection control that took place. The severity of Nicole's case meant that as soon as the back wash was finished there were multiple things to attend to, signified by the constantly 'bonging' alarms identifying the instability of Nicole's condition. After Nicole was stabilised Karen's attention was soon drawn to the family, anxiously waiting in the waiting room to see Nicole, as well as the social worker who wishes to talk with Karen to understand how best to support this patient and the family. While this all takes place Karen is planning what she needs to do next as the medical plan is to take Nicole for a CT later in the day. She is also observing her bay and noting all of the things that need restocking, disposal; as well as the various therapies that need to be reconnected (such as the nasogastric feed) or what the dialysis is up to. But infection control was not talked about. Instead, there was talk about the patient and the rest of the ward. The nurses in the study rarely discussed[35] infection control.

In the participants' interviews they were asked directly what their infection control practices were and there were a range of similar, yet different aspects discussed. Anton saw washing his hands and wearing a gown as infection control practices.

> ***Anton:*** *Apart from washing hands, I tend to wear a gown too.*
>
> ***Allison:*** *Just the cloth gown or?*
>
> ***Anton:*** *The cloth gown, yes, or unless I'm in the single room then I use the yellow disposable gowns but it's the cloth gown, you know, if I'm dealing with a patient or if I'm floating a bit. Just … with my patient, I'll use that (the cloth gown). If not, take it off but yes. Also protect my clothing as well. (Anton final interview, lines 28–35)*

Beatrice, on the other hand, answered the question more philosophically. She said:

> *I try to treat each patient as a discreet infection control.*

[35] Infection control was discussed in the context of the infectious patient—this was when it was talked about. However, in general, infection control was not talked about in the everyday sense that standard precautions implies.

> *So, I use standard precautions, I would say at nearly every instance when I'm touching a patient.*
>
> *If I'm looking after a patient, I either have a plastic gown, which we don't tend to use a lot of, or a cloth gown and I get rid of it when I'm finished doing my patient care. If I'm in a single room, I put on my yellow gown—I would say most of the time. (Beatrice final interview, lines 67, 71–72, 89–92)*

In this example Beatrice sees each patient as needing their own infection control focus. She used standard precautions and protective attire such as a protective plastic gown for a patient in isolation (in the single room), or a cloth gown for a patient known not to be infectious. In contrast, Caroline interpreted the question more globally:

> *Well I suppose it means controlling the spread of bugs basically. You keep your bugs to yourself and someone else's bugs to themselves and if they all get mixed up and create a big problem. (Caroline final interview, line 30–32)*

She then went on to say that infection control was handwashing:

> *it first means and it was drilled into us at nursing school wash your hands, wash your hands, wash your hands, always (said with emphasis) washing your hands. (Caroline final interview line 35–36)*

This was a sentiment echoed by Katrina:

> *Um that it's about minimising the transmission of bugs, minimising the infection rates around the patient so. I would try and explain it that every patient, every person has their own organism etcetera and when I am coming in and doing stuff to them it can transfer from me to them from them to me, from me to other surfaces so with the infection control practices we try and minimise the amount of organisms that get transferred. So therefore when they are transferred they are putting people at risk and increasing infection rates so by minimising the amount of transfer we will minimise the amount of infections and cross-contamination I suppose. (Katrina, line 48–56)*
>
> *Washing my hands, using gloves all of the time. My hands break down very easily from the latex and the stuff that we use so I use the blue[36] gloves all of the time. I wash my hands when I can but again the soap is disgusting so I try and use the alcohol based hand rub and just being aware what is on my uniform, putting a gown on if I have to. (Katrina final interview, line 58–62)*

Lesley on the other hand interpreted the question more personally.

[36] Blue gloves refers to nitrile gloves, which are designed to be used by people who have allergies or who are sensitive to latex.

> *Preventing myself being exposed to things as well as preventing infection being exposed to other patients or other areas and protection basically. (line 9–11)*
>
> *I always wear gloves when I go near a patient at least I try to, I feel like I am always washing my hands.*
>
> *Yep umm I quite often wear goggles if I think that I might get splattered um ... what else do I do, I think that is about all. And depending on what kind of procedure I may or may not wear other protective gear. (Lesley final interview, line 13–19)*

Lesley's views of infection control were also shared by Sandy:

> *I guess, basically, I treat everyone as if they have some sort of infection as such. So, I'm protecting the patient and I'm protecting myself at the same time using all the precautions and obviously, you know, gloves with bodily fluids, goggles with, you know, any blood handling if there's going to be any fluids as such sloshing around and just making sure that the patient's kept safe and I'm kept safe. (Sandy final interview, line 21–25)*

Whereas Wanda saw infection control in this way:

> *Well, I like to make sure that if I've touched anything, that we use the alcohol hand rub. I like to make sure that everybody's got some at their bedside. I do that every time I'm on, so that if I need to use it, it's there and I can be assured that it's there // and if I'm in the single room, // (or) I'm team leader a lot of the time, my infection control practice is just to make sure my hands are clean between each patient, basically. (Wanda final interview, line 71–77)*

From these comments it can be seen how the nurses in the study organised and categorised their nursing practice as infection control practice. These categories included hand hygiene (either through handwashing or through the use of alcohol rubs and gels) and protecting yourself through the use of barriers like gloves, the use of goggles, wearing of gowns, either impervious gowns (yellow gowns) or cloth patient gowns. These practices could be considered the obvious parts of infection control practices, ones that nurses identify with and report to be infection control.

In this account of Nicole's work (pages 64) where were the infection control practices? There is no evidence of handwashing or the use of alcoholic hand rub, though there is a bottle of alcoholic hand rub present on the blue trolley. Nicole uses personal protective attire in this account, in the form of wearing gloves. In her

interview Beatrice refers to the overarching principle of standard precautions. In some way they all talk about minimising spread and protection through the use of handwashing, gloves, goggles and gowns.

Prior to the 1980s, infection control was shaped by working with patients known to be infectious. With the rise of HIV and AIDS, the Centers for Disease Control and Prevention (CDC) took a universal approach to all precautions with blood and bodily fluids. So irrespective to whether a patient had a known infectious disease of the blood or bodily fluids they were managed with the same level of precautions, which gave rise to the term universal precautions. In 1996, the National Health and Medical Research Council (NHMRC) and the Australian National Council on AIDS (ANCA) furthered the precautions that the CDC had established and adopted a new approach to everyday work practices, entitled Standard and additional precautions. Standard precautions are defined as 'work practices required to achieve a basic level of infection control and are recommended for the treatment and care of all patients' (DHA 2004, section 2.1).

Obvious infection control

All nurses talk about washing their hands and wearing gloves. But in exploring these practices and to make sense of how policy directs this care, I explored the intersection between practice and policy further so Karen's care can be understood as within infection control. The DHA 2004 guideline stipulates quite clearly when hand hygiene occurs and the wearing of gloves. From the interviews the importance of these two procedures is evident. However, the policy portrays nursing practice as a homogenous landscape. That, for instance, handwashing simply includes when 'contact with, or physical examination, of a patient, emptying a drainage … bag, or undertaking a venepuncture or delivery of an injection' (DHA 2004, section 12.1). The policy states that handwashing is required to be undertaken by health care

workers before and after they have had significant contact with the patient. Therefore, it could be argued that handwashing did not need to occur during the entire episode of the care detailed between Nicole and Karen.[37]

Gloves were used by all three participants in this account of care. According to the policy:

> HCW[38] should wear gloves when it is likely that their hands will be contaminated with blood or body fluid, or come into contact with mucous membranes. HCWs should change their gloves and wash their hands after each patient procedure and also during multiple procedures on the same patient if there is a risk of cross-contamination. (DHA 2004, section 13.2).

In the care of Nicole, though the care provided is significant, it is one continuous act of care, which does not move to another patient or move to other procedures and therefore does not require handwashing before or after the care of the patient. As this care is continuous, Karen did not leave the patient and there is minimal risk of contamination by blood or bodily fluids; there is no need for handwashing.

The use of gloves is about providing a physical barrier to protect hands from the risk of blood and bodily fluids. In this account it could be argued that the nurse providing head support to Nicole is appropriately wearing gloves as she is maintaining the ET tube and she has risk of being exposed to mucous membranes and potential bodily fluid in the form of saliva or sputum (spittle). The orderly, in placing a hand on the buttock to turn the patient, has a potential risk of contamination as it is not known what lies under the covers, and wearing gloves potentially minimises the risk of contamination from urine or faeces. According to standard precautions guidelines, the use of gloves by Karen should be focused on exposure to blood and bodily fluids. It could be argued that Karen needs to wear them due to risk of contamination by

[37] At the time of collecting data in this account Karen was commencing this activity, so it is unclear as to whether hands were washed with soap or water or decontaminated with alcohol rubs and gels prior to commencing the back wash.
[38] HCW—health care workers. A general term to refer to all personnel in the health care setting who provide hands on care. This term can refer to untrained assistants to doctors and nurses.

blood and bodily fluids; however, it could also be argued that after Karen assesses the patient's back that the risk of contamination by blood and bodily fluids has been minimised and the task of personal hygiene does not require the wearing of gloves. The *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004, section 2.1 and 4.1) emphasise that risk comes from exposure-prone activities to blood and bodily fluids. The guidelines assist the staff in ascertaining if activities are low-, medium- or high- risk exposure-prone activities. Using these guidelines as a risk assessment tool it could be argued that Karen did not need to wear gloves at all while washing Nicole's back as there was relatively low probability or likelihood of Karen being exposed to Nicole's blood or bodily fluids.

Presence and absence

The first way of understanding the infection control practices that were taking place in the room with Nicole and Karen can be considered as both a presence and an absence. There are two things that this account of care points to. Firstly, there is an absence of any signage that would suggest that the patient is infectious and requires additional activities to contain or control the spread of infection. Secondly, the presence of Nicole in a normal bay suggests that she is not infectious. Both these facts denoted that the care that is taking place requires only standard precautions. In understanding that Nicole is being cared for in a normal bay requires an understanding of how the ICU is organised. Understanding how infectious and non-infectious patients are organised and ordered within the patient care spaces of the intensive care unit assists in understanding how these practices are organised and ordered.

The ICU was made up of five bays of four beds each (see Figure 3.1 for example of a four bed bay). Each bay was open plan and communal, although each bay was

individually numbered and contained equipment to manage one patient. It is also relatively open plan in that everyone in this space can see, hear and smell what is happening in corresponding spaces. Nicole's 'infectious status', or lack thereof, is therefore made known because she is located in one of the four-bed bays. Had Nicole been understood to be infectious she would have been located in one of the three isolation rooms. Alternatively, if they were all full, she would have been placed in the four-bed bays with patients who had similar infectious status and signage would have been placed around the corresponding bay to alert all personnel that the patient within the bay was known to be infectious.

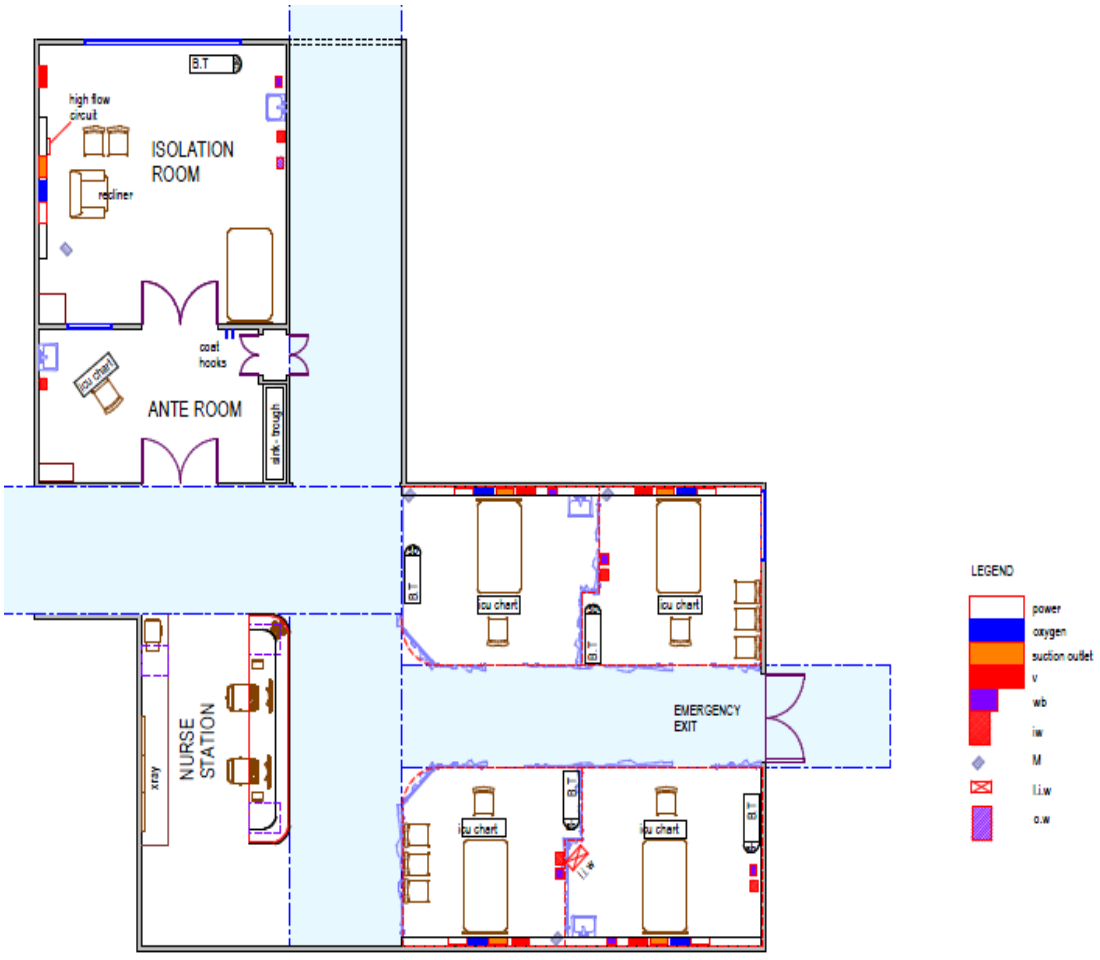

Figure 3.1: Map of the layout of one of the isolation room and its proximity to the nurses' station and a four-bed bay

The absence of signs enabled those around Nicole to understand that she was not considered to be infectious. In the *Infection control guidelines for the prevention of*

transmission of infectious diseases in the health care setting (DHA 2004) there were no recommendations for the use of signs to inform others about the infection status, even though this was a widely accepted practice. In the current edition of the guidelines (NHMRC 2010), it is explicitly described as a communication strategy to place appropriate signage to limit access to the clinical environment and to provide the appropriate transmission-based signage. This signage provides guidelines as to the preferred precautions to be used (NHMRC 2010, pp. 125–127) as a strategy for controlling an outbreak. Nicole's presence in the general bay and the absence of any signage around her provides the first indication of Nicole's infection-free status. From this status the nurse interprets this finding and responds to Nicole with the appropriate level of infection control precautions—that is, with the standard or universal level of caution, known as standard precaution. According to *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* these standard precautions are the basis for all infection control techniques for patients known or unknown with a disease that is carried in the blood or bodily fluid (DHA 2004, section 2.1). These are static principles that govern all practices, irrespective of situation or patient and are rules related to conduct. Just as in the game of soccer or tennis, there are rules about where a player can move, stand and do things in a certain way. These rules of the game are not spoken of at the beginning of a game, rather they are implicit expectations that the player will know that these rules apply. These rules in the game of soccer and other sports are the same as the rules in infection control practice. There are rules around infectious patients and signage is put up to remind staff that they must comply with the rules; however, in the absence of signs these rules become implicit.

In understanding infection control practice as a means of understanding nursing practice, the field note exemplifies what is done to and with the patient, but also the

physical environment in which Karen works and nurses the patient, Nicole. At the same time, Nicole's physical location in the ward has everything to do with an understanding that she is not infectious. Part of this understanding comes from Nicole's diagnosis or reason for admission. Nicole is conceptualised as a patient who has been diagnosed with a suspected urinary tract infection or infected diverticulum, a condition that is understood not to be infectious.[39] At the end of each shift, nursing staff hand over[40] the care of their patient to the next staff member, during which time the patient's condition is summarised.[41]

This handover time is also another opportunity to hear about the patient's infection status and therefore the kind of infection control practices become understood. In the case of Nicole it is the absence of information that informs the nurse about her infectious status. There is no mention of the patient having a particular infection that caused the urinary tract infection or infected diverticulum. Though the patient is suspected of an infection, they are not deemed infectious.[42] Though this is not explicit, as it is not mentioned during handover, in this account it is made known to those who work in the ICU by where the patient is positioned in the intensive care unit.[43]

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[39] The term infectious is an ambiguous term. Infectious, according to *Mosby's dictionary of medicine, nursing & health professions,* is something 'capable of causing an infection' (2010, p. 895.) So Nicole has an infection (potentially a UTI or an infection of her diverticulum) from a pathogen that causes disease, however she is not considered infectious. Infectious, according to Mosby's dictionary, 'is any communicable disease or one that can be transmitted from on human being to another'. Though all infectious agents, such as the bacteria affecting Nicole, have the potential to be infectious, that is communicable, the infection poses more risk to the host (Nicole) rather than those around her.

[40] Handover or nursing shift report.

[41] In the context of ICU, this handover typically includes the patient's name, age and reason for admission being recounted. It is not that different from the handovers that take place in other wards throughout the hospital. This is then followed by pertinent details about the patient's condition, therapy, highlighting or summarising what has taken place, what is planned or expected.

[42] Infectious status, that is capable of causing infection.

[43] Nicole's presence in the ward is a local rule in how to manage the infectious or non-infectious status of a patient. Many units use a policy of exclusion until proven otherwise such as Western Australia (Department of Health 2005), the Dutch have a 'search and destroy policy' (The Health Council of the Netherlands 2006, p. 24) and this exclusion also extends to newborn babies (Mesman 2012).

The normal local process of Nicole being in the regular non-infectious space, the bay, and the absence of any signage, causes infection control to be placed in the hind ground. What moves to the foreground are the normal ICU day-to-day processes. As an ICU nurse, I had worked for years in such seemingly normal environments, so for me this scene was all too familiar. The blur of activity and the cluttered ICU trolley also felt quite normal. The leftover objects from a time prior to intubation, such as the cup and spoon (to offer simple ice chips to moisten a patient's mouth) or the old CPAP mask from 24 hours earlier, are also not so uncommon to be left as remnants. The elements and artefacts that cluttered the intensive care bay corroborated what was happening on the charts, the anxious looks by the nurses as they rolled Nicole over and the urgency of the act of giving Nicole a backwash. At times, the deteriorating patient overwhelms the situation and hence simpler activities of discarding an obsolete cup and spoon or the taking the used CPAP mask for sterilising become reprioritised by more pressing matters such as the attention given to the ventilator, the monitor or the dialysis machine.

Care of the patient in ICU

To the ICU nurse the machinery or technology in the bay represents ways of understanding Nicole and her condition. In my field notes I recorded that Nicole is constantly monitored. Though documentation of routine observations such as heart rate and blood pressure is common throughout many health disciplines, the documentation of the ICU patient includes these usual observations, but also the documentation of the technology as well. This constant observation includes observing, recording and interpreting the information that the monitor and the ventilator provide—such as airway pressure, mean arterial pressure—and the monitoring of fluid volumes or calculating exactly how many micrograms were required or administered for Nicole's weight of a particular medication such as an

inotrope. While it is routinised to document and record on charts these multiple observations of the patient and the associated technology, these routines could be 15-minutely to every hour. Documentation is the outward sign of an internal observation, thinking and interpreting the findings of the objectified body. Latimer's study of 'ward life' describes documentation being 'front stage', which provided an account of the visible aspects of nursing (2000, p. 43)[44]. Even if documentation does not occur, the patient is constantly watched; the monitor, the technology (the dialysis, the ventilator, and the infusion pumps) are constantly observed and interpreted according to criteria set by the medical staff and consultants. The patient is then understood in terms of meeting these parameters and the nurses manipulate the settings on the ventilator to achieve effective oxygenation; they also adjust infusions of medications to achieve objectives such as improving mean arterial pressure through the use of inotropic medications (see footnote 30 on page 65). White suggests that the infusion pumps, the monitors and the technology are all means by which 'the body can be understood or become legible' (2009, p. 125). This legibility is a continuation of the biomedical approach to the body where the understanding of the body can be reduced to what the infusion pumps and monitors read. Similarly, the patient's body can be reduced to how much urine the patient makes or what their cardiac rhythm is doing. Twigg's (2000) research on care work as body work is an example of how the body is discussed and made visible through the focus on the body, or rather the declining malfunctioning body (2000, p. 392). It could be argued that when nursing in such a technologically rich environment such as in ICU the body is reduced to these parts and that documentation is evidence of these parts. The reality is that in these highly technologised environments nursing practices are valued within a system that appears to value and uphold the medical model. This is

[44] Front stage is a term originally developed by Goffman (2012 (1959)), referring to items that we immediately identify with. That is documentation is something that we immediately identify with as part of nursing

problematic as the presence of nursing is evidenced only through its representation in the form of the documenting of observations and the charting of infusions.[45] Such representations legitimise what a nurse does in their everyday practice. Twigg, however, argues that 'good practice seeks to get away from this and to stress the person behind the superficial attributes' (2000, p. 392). In Twigg's case, she is describing the care work that takes place in the context of gerontology or care of the elderly but this notion can be applied the 'superficial' nature of intensive care work.

As White (2009) suggests, the patient is made visible and can be understood by the technology and the recording of observations. However, I would argue that the patient is not only understood by technology and observations, but nursing is also understood in these terms. It is through this legibility of patient observations and the monitoring of technology that the practice of nursing and body work can be apprehended. In the field notes (on page 60) I describe the blue trolley or workbench as cluttered. This familiarity with the field caused me to describe this situation as cluttered and normal. Some might interpret this as a judgemental description of the scene. Just as the workbench is the carpenter's workspace, and the desk the administrative worker's space, the bay, the bed and the blue trolley represent the nurse's work bench. Just as when work overwhelms the office desk, so too the blue trolley the nurse's work bench is overwhelmed with work—things needing to be filed away, sorted, evaluated and prioritised. The cluttered space of Karen's work bench, together with the multiple infusions enables me, as a native, to read that this patient is 'busy' or critically ill. Some could interpret this space as cluttered, disorganised and potentially a sign that the nurse, such as Karen, is not keeping 'on

[45] Documentation is evidence that the nurse (and for that matter other health professionals) were there. The dominance of the medical model means that the focus of documentation is on health or lack thereof. The spiritual–psychosocial body is absent in notes or relegated to other professionals such as social workers and psychologists. Or alternatively, nursing notes document such abstract terms as 'offer reassurance', which is often found in the nursing practice guidelines and instructions.

top' of things. But I see this as a sign of the nurse reinterpreting and reprioritising that which is biomedical from that which is care work/body work and that which is relegated as other.

The blue trolley represents all that nursing should need to provide moment-by-moment care to Nicole. The critically ill patient can be stable at one moment and in the next be deteriorating and so the blue trolley represents stability, the nurse is not required to leave the bedside for the majority of Nicole's intensive care needs. The blue trolley represents how Karen can provide Nicole with her hygiene needs but also meets the needs of her medication regime, the infusions, taking blood samples as requested, and adjusting parameters to stabilise Nicole's condition. For the majority of care Karen does not need to leave Nicole's presence. The reason for not leaving the patient is the concern, even fear that Nicole's condition could quickly deteriorate. By having a stocked blue trolley with all of her needs, Karen is able to meet her patient's physiological needs without leaving the bay.

Infection control that is just embedded in ICU nursing

Evident too in this account are assumptions about the practices that happen behind the scenes that make this account as it is. This account also assumes that the sterility of equipment is maintained, for example, there are set pieces of equipment that can be reused such cotton sterile drapes, ventilator equipment (that gets cleaned according to the standard, by qualified staff).[46] It is noteworthy that during the rolling of the patient and attending to the back wash, all of the invasive lines remained intact—there was no breach in the integrity of any of these devices. While this is also nursing care taking place, staff need to also be aware of guiding principles in care; for example, examining the evidence to decrease the incidence of ventilator-acquired

[46] In the monthly nursing ward meetings infection control was a standing agenda item of discussion. On one occasion there had been a breach in the equipment cleaning standards and systems were put in place to ensure that this was not repeated.

pneumonia through the use of the humidifier or a filter. Other practices guided by protocols that are based in infection control were the use of closed suction systems for endotracheal suction so that the suction catheter did not leave the ventilator circuit unless the units were deliberately disconnected. Finally, the fact that the nurse assisting Karen held onto the endotracheal tube, eliminating the possibility of dislodgement or disconnection, there is an expectation that she also provides constant assessment of the integrity of the tube by listening for possible air leaks around the breathing tube while the patient is being turned. This form of assessment and monitoring ensures that the endotracheal tube remains correctly positioned, eliminating potential risk of infection from aspiration or from extubation.

Hence, in this case the following infection control principles were highlighted or questioned. Significantly, it could be asked quite simply if an aseptic technique was used. At the core of standard precautions is protection for the health care worker (and by doing so preventing the spread to other patients and staff) from the risk of exposure to blood and body products. In the case of Nicole, potential exposure to blood and body products come from the multiple invasive points in her body, which include the CVC, cannula for continuous dialysis, the indwelling catheter (IDC) for urine, the endotracheal tube for sputum, saliva or oral secretions. Of course, there is always the potential for excreta. During this observation each of these potential risk factors remained unchanged. There was no excreta, no leaking from invasive lines, and no disconnection of the many tubes that connected Nicole to life-maintaining equipment. The potential risk, that is exposure to human excrement and bodily fluids were there but these potential dangers did not eventuate. Hence, the entire emphasis of standard precautions is to provide a basic level of control for all patients as a minimum requirement, to minimise the risk of person-to-person contact of blood,

body fluids and exposure to non-intact skin or mucous membranes (DHA 2004, section 2.2).

When considering all of the potential infectious issues and ever-present microbes, what we witness is not exciting in the sense of high-acuity or high-risk patient care. It is conceived of as normal everyday care with a patient who is relatively intact. However, what this does demonstrate is that infection control principles are not standalone events, rather they are interspersed among the many things that nurses do in their practice. In this case, it could be argued that the infection control practices are 'unremarkable' care; infection control practices are not documented, therefore nurses' care practices that prevent contact with potential risky microbes cannot be made visible through writing. Instead, they are only visible if one is to interpret all that is done to maintain bodily integrity through standard precautions that are made explicit in this field note, rather than implicit as they go unremarked in day-to-day body care. These practices are embedded into the everyday, hence taken for granted and often assumed practices. Moreover, this demonstrates that infection control is also about body work. By uncovering infection control practices we also gain a better understanding of how nurses navigate body work. The core of infection control principles serve the situation such as ICU care, where human bodies are potentially leaking and non-intact, and thus nurses and health care workers were all at potential risk of contact with these leaking bodies.[47] This required people to embed infection control principles in the body work that is undertaken.

[47]Leaking bodies: a term that I am loosely using in reference to the fact that the body is not intact, or whole. Bodies normally leak or expel things like vomit, excreta, urine, mucous and blood (in nature that is usually linked to things like dysfunction with the exception of menses). In the medical situation a body can be pierced and yet metaphorically be intact because it does not leak nor it can be contained such as an invasive cannula. The body is pierced and has the potential to bleed and leak and yet it is intact, secure and contained. Further reference will be made to leaking and intact bodies in Chapter 7.

Little bits of so-called infection control

There are elements in this account that could be considered as breaches of infection control practices. For instance, Karen threw linen onto the floor before later disposing of it in the linen bags. There was the cluttered trolley with yesterday's equipment such as the CPAP mask that had been worn by the patient and potentially had been contaminated, or the nurse's personal drink bottle on the bench, which many would argue posed risks of environmental contamination. There is also the ongoing debate regarding the wearing of a wrist watch when providing direct care to the patient where the wrist watch could become a vector for cross-contamination.

Conclusion

To move the principles of standard precautions in infection control from the hind ground to the foreground is to question where infection control principles are located in day-to-day practices. What are infection control principles in the care provided by Karen to the patient Nicole? There is immediate evidence of artefacts of infection control practices such as gloves, which in this account of practice highlights obvious infection control. However, gloves are worn by all, even when there appears to be little or no risk of exposure to blood and bodily fluids during the turning of the patient. But the principles of infection control are not just about the things that Karen does to Nicole, rather the things that Karen has around her that enable infection control practices to be put into practice. These include the alcoholic hand rub and gel, the boxes of gloves, the location of the sink to wash hands, the presence of bins and the patient's location in a normal four-bed bay (as seen in Figure 3.1 on page 72 and in Appendix 4).

The implied principles governing this whole account of care were the principles of standard precautions. These standard precautions are work practices required to achieve a basic level of infection control. The field observation and interviews

indicate that nurses in ICU constantly navigate the terrain to implement standard precautions. ICU is unique in that the provision of care, in the majority of cases, is delivered by one nurse to one patient. What is also implicit in terms of infection control and occupational health and safety relates to potential risk of exposure to blood and bodily substances. Despite her body being pierced by medical devices in many places (creating potential risk of Nicole getting an infection in the form of indwelling urinary catheter, cannulas, endotracheal tube, CVC and dialysis) the perception remains that Nicole is intact and complete. She is not leaking; she is contained, further limiting the potential risk to Karen as the nurse and others who assist from being exposed to blood and body products.

In understanding infection control as a practice it is important to note that in the case of Nicole and Karen it remains in the hind ground of everything else that takes place. Karen, in this case, does not come and go from the patient's bedside. She does not break the lines that are created between the patient's body and the multiple infusions that are connected to the patient. The very fact that all of the lines are maintained demonstrates that important infection control principles of maintaining asepsis and minimising potential contamination and cross-infection.

This field note is a single event of care, it also was deliberately chosen because of the normalcy of this event and also the frequency of this event (this will be demonstrated when we look at the foreground matters of Nicole's care). What is central to standard precautions are the four principles that have been discussed. But interlaced with these practices are all the other practices that take place at any moment in nursing practice and which are required to operate alongside of the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004). This is not to say that infection control principles being in the hind ground was wrong, rather that such practices demonstrated that infection control practice

was interwoven with many other practices, such as body work. These guidelines outline the principles and practices required to prevent transmission and that successful infection control is based on good hygiene and identifying hazards and implementing risk management for hazards (DHA 2004). This document claimed to provide the 'foundation for all work practices and procedures'. As a foundational document it does not, however, provide specific examples of how, when and what principles should be put into action in the example of Nicole and Karen. This potentially leaves participants without clear guidance or in an ambiguous space because it is unclear if everything that needed to be done was done in practice.

CHAPTER FOUR: BODYWORK A SHARED WORLD

Introduction

In the previous chapter I showed how infection control is understood in the context of the intensive care patient, where infection control practices share a common space with intensive care practices. These infection control practices are often hidden from view as the technology of intensive care or the acuity of the patient is foregrounded. However, it is my contention that infection control knowledge and practices are embedded in the everyday world of intensive care. In the chapter that follows the observations are again about everyday accounts of practice. Through these everyday accounts of the participants' worlds, depth is added to the often uni-dimensional landscape called infection control. The one-dimensional landscape that looks at practice in a particular way, only in terms of compliance to nursing procedures and policy, does not enable exploration of the breadth and depth of embodied knowledge in nursing practice: the knowledge that is embedded in an activity. In this chapter I will unpack the nursing ritual of patient hygiene—washing a patient to demonstrate, as Goopy asserts, that 'rituals do things' (2006, p. 110). Through attending closely to the ritual of washing our attention is drawn to its complexity. This complexity comes by identifying the multiple layers of either static or dynamic[48] knowledge found in this day-to-day nursing activity.

This chapter will explore body work, what nurses call basic work because such practices are routine, normal, day-to-day nursing activities. It is through unpacking the everyday wash that infection control measures can be made known. These measures are hidden because of the hybridity of nursing practices. When considering

[48] By static knowledge I refer to nurses' understanding of protocol or policy as these forms of knowledge are standardised for all users, not open to interpretation and often require a process to change how things are to be done, such as procedural knowledge. Dynamic knowledge refers to how nurses use a range of knowledge from literature, research and includes practical know-how.

the ‘wash’ it is easy to consider it simply as an act of meeting a person’s hygiene needs, an activity that is often considered a domestic duty or women’s work. In requestioning the taken-for-grantedness of body work, such work can be re-evaluated not just as washing skin but rather to expose nursing work as more than domestic duties or women’s business. Moreover, these practices occur in a regulated space; regulated by many rules that are both accomplished and in operation in the ritualistic act of washing a body.

Bourdieu, habitus and infection control

Before even unpacking infection control practices in body work, it is firstly important to understand how bodily practice are embedded, either consciously or unconsciously, to construct this group of practices called hygiene. My aim is to explore how these acts can then be thought of as nursing practice. Bourdieu’s (2003a and 2003b) understandings of habitus (field and capital) are useful so as to unpack the knowledge embedded in practice through the accounts of care that follow in the washing of Alan and Nicole. The hope is to expose how ‘the wash’ also represents a social space in which ‘care’ takes place. Cregan describes Bourdieu’s idea of habitus as ‘the complex mapping of the interpenetrations of all the social, cultural and physical elements by which we know ourselves, and through which other recognise us’ (2006, p. 69). Our behaviours, as habitus, are the result of absorbed social, cultural and physical experiences and behaviours. In terms of nursing practice and infection control, habitus can be used to understand how the social, cultural and physical elements of the ICU space intersect to afford a view of what nurses do and how others come to recognise this as nursing, and hence recognising this field as nurses’ practice.

In understanding body work from the perspective of habitus causes me to think about the act of hygiene as not something that is simply done to the patient. It is a mutual space where an activity is done to the patient and hence has meaning that is personal, social and cultural for all involved. What is considered hygiene needs to the patient is actually multiple actions thought of as body work. That is, nurses do not have hygiene needs, rather they decide that the patient needs to have their hygiene needs met and, as such, the patient becomes the recipient of this nursing function. But the nurse providing, orchestrating, coordinating and participating in this function provides more than a washing of somebody's body—they are providing nursing care, a function easily objectified as merely basic. The task of meeting a patient's hygiene needs for washing skin requires many things to be done simultaneously so that a nurse can achieve and make sense of this body work.[49] But what is it that a nurse does when they 'do hygiene'? What are they participating in? What is the knowledge that is embedded in these acts that form a group of practices called hygiene nursing practice? Bourdieu's work enables body work to come back into view out from under its very taken-for-grantedness. What is normally hidden from view through labelling as basic comes onto centre stage.

Alan and Donna

In contrast to the previous chapter's account of personal hygiene, the following is an account of personal hygiene provided to Alan by his nurse Donna. I had met Alan early during my data collection. He was an educated man who had been admitted to ICU with Guillain Barré Syndrome. The condition had rendered him unable to breathe without the assistance of the ventilator. Alan was in a waiting game until the myelin around his nervous system grew back, returning his nerve pathways to normal, including the nerves to his muscles that enabled him to breathe. He was on a

[49]In times gone by we were happy to say that we washed a patient. Bodywork seems to have lost its appeal and has been relabeled as interventional hygiene as suggested by Eigsti (2011).

ventilator and as this was going to be a long journey to recovery he had had a tracheostomy tube inserted early in his admission to assist with his long-term respiratory management. During the early part of his hospitalisation he was incapable of making any movements throughout his body, even unable to make the slightest facial expression. Despite this he remained cognitively alert; locked in his body and waiting for the myelin that wrapped every nerve to grow back. He was awake and alert, hidden behind closed eyelids. Alan was able to communicate with a simple nod of his head.

> *It was about seven in the evening; Donna was recording the observations onto the chart and explained to Alan that she would give him a wash once she had finished doing her observations. Then two visitors arrived and Donna explained how Alan had been going and what the plans were in relation to his management. Donna explained that she was just about to give Alan a wash. The visitors asked how long the wash was going to take and decided to go get a cup of coffee and would come back in about 20 minutes.*
>
> *After the visitors had left Donna went over with a trolley to the linen trolley that was on the other side of the four-bed bay and began collecting towels and face washers, she then returned with the trolley to Alan's bay leaving it at the foot of Alan's bed. Collecting a bowl from the blue ICU trolley she moved to the back of Alan's bay to fill the bowl with warm water from the sink. Carrying the bowl to the trolley she pulled the curtains closed.*
>
> *Moving the blue ICU trolley a little more out of the way she then picked up some gloves and applied them, as she did she moved to Alan's left-hand side. She began removing Alan's gown, holding the weight of his left arm with one hand and with the other pulling down the gown. Stopping, Donna then carefully followed and traced the intravenous line that was coming out of the left sleeve of the gown back to the infusion pump and the from the pump she followed the line to the bag hanging on the intravenous pole. Grabbing the bag of fluid she disconnected the giving set from the infusion pump and threaded it through the sleeve of the gown. While doing this she encouraged Alan to assist by raising his arm as much as he could, which was just a few centimetres off the bed.*
>
> *In the background was the 'bong bong' of the monitor. Looking up at the monitor, she then moved her hand to collect a stray ECG cable that had become disconnected while removing the gown. Applying a small amount of pressure the cable quickly snapped back on the electrode. She assisted Alan's right arm out of the gown, leaving him naked to the waist. Moving to the trolley she began wetting face washers, opening drawers she squirted a small amount of liquid soap into the water. Grabbing a face washer and towel she moved to the right side of Alan. She began washing his face; taking her time with the face washer she took extra care to remove the blue dye from his lips from the swallowing test that took place earlier on in the day. Getting another face washer she washed Alan's chest, drying it with the towel that now lay on the bed. Placing a towel along the bed she raised his*

> *left arm, supporting the weight with the other hand she washed his arms working her way down the arm from shoulder to the hand. Each finger was gently and slowly washed, meanwhile she bent over as if inspecting the skin on every part of his hands. As she did this she talked with Alan about how things were going, the latest cricket score and how home was going.*

When I recall an event such as this I realise that this is a typical occurrence in ICU, actually a typical occurrence of many practice settings irrespective of location; that is a ward, residential care facility, or a parent or carer with their child. Provision of such seemingly simple intimate care to a patient is no different to other settings, while I would argue the practice setting makes it unique. Bathing a patient is one of the most intimate of personal caring activities that nurses provide. The act of washing skin remains the same. What makes this different to what happens at home, in a ward, or in a residential facility, is the monitor, the presence of the ECG cables, the ventilator and the physical environment.

Donna's feel for the game in the field of ICU, a socially constructed space, is still governed by all the rules and expected outcomes of personal hygiene as it is in a ward and to a lesser extent a home. The way that Donna washed Alan's body is not embarked on as a game through conscious means, or strictly an ICU washing 'game'. Part of this feel for the game, Bourdieu would argue, is one that we are born into or raised into (Bourdieu 2003a, p. 67). The habitus is embedded (and embodied) through individual and collective beliefs about hygiene and Donna's social and cultural capital as a nurse.

Washing care; the field of nurses' body work

Nursing would often call an activity such as a full body sponge, basic. In general, a full body sponge as personal hygiene is a task often given to students, assistants in nursing and personal care attendants. Twigg (2000) suggests our thoughts about body work, because it is dirty or taboo work, are ambivalent. Washing people's bodies is an intimate act considered to be in the domain of women's work, basic work or the

work of servants (Lawler 1991; Davies 1995; Latimer 2000). Fulbrook and Grealy (2007) refute this notion that personal hygiene and the full body sponge or wash is basic. They state 'nurses may not always perceive it as deserving of priority. However, how well patients are cared for has a direct effect on their sense of wellbeing and their recovery' (2007, p. 187). They go on to say that 'good personal hygiene is nowhere more important than in critical care' (2007, p. 188). This suggests that even though washing is considered of low priority, it is vital or essential for the wellbeing of the patient.

Despite this variation in opinion, body care such as the full sponge is assumed to require little skill, knowledge and practice. It is overly familiar. In the context of ICU, personal care has little glamour in the context of technological care taking place. For instance, in the Capital Hospital's *Nursing Practice Standards* of ICU (2001, section 1.8.5) the role of the team member or the patient care nurse in ICU is prescribed (see Appendix 5). These nursing practice standards provide nursing staff with guidelines of ICU expectations each hour, shift and day. These standards guided nursing practice and had five main aims in nursing care: accurate documentation, safe intravenous and drug therapy, *patient comfort and hygiene*, psychological support and adequate rest (Nursing Practice Standards 2001, section. 1.8.5). These standards also clearly recommended the frequency of some of these comfort and hygiene activities, such as: every two hours the patient would receive pressure area care (PAC) or be repositioned, and the patient's mouth and eyes would be cleansed; on the fourth hour patients would receive nasal care, whereas a full wash was recommended daily. The majority and remaining guidelines are in relation to the physical findings of the patient such as the recording of blood pressure, breathing, urine output and monitoring how the technology is performing. These tasks not only demonstrate the things that are done to the patient but provide evidence of the

nurses' presence in the care of the patient. Though hygiene and comfort are frequent features of the ICU nurse's day, they are somewhat diminished in comparison to the number of other things that a nurse is required to do for the patient in such a technologised area.

For simplicity's sake, what is seen is Alan being washed by Donna. Performing a wash on a patient is rendered as a simple task similar to carrying out a wash on ourselves. It is the very taken-for-grantedness I want to challenge in this chapter so as to understand how such a view masks nurses' actions and their centrality in care.

Bodily care is taught to nursing students during their earliest stage of their course of study. They are taught principles such as: start at the face and work down (cleanest to dirtiest). The rationale for this is that the face is the cleanest and the feet are the dirtiest (however, this would assume that an immobile patient's feet are dirtier than a frequently touched body part such as the hands). They are also instructed to keep patients covered for dignity, privacy and warmth; to promote independence; to wash in an upward motion along a limb (to encourage venous return); and to change towels, flannels and water when necessary to prevent the patient getting cold and to minimise the movement of transient microorganisms (Baeur 2009; Parker 2012).

The things that Donna does during this full sponge or wash I have summarised in the following Table 4.1

Table 4.1: Summary of activities during wash

1	Communicates a plan to patient and visitors
2	Collects necessary equipment and prepares the area
3	Closes the curtains to ensure privacy
4	Manages intravenous giving set to ensure safe removal of patient gown
5	Undresses Alan
6	Encourages Alan's independence by asking for his assistance
7	Awareness of monitor and changes to alarms
8	Commences wash—starting at Alan's face and working way down his body
9	Moves Alan's limbs to assist with the wash, supporting his weight
10	Prevents linen from becoming wet
11	Inspects skin (lips and fingers)
12	Maintains continuous communication

This table or list I believe is still a very oversimplified account or what I term as a cookbook approach to performing a patient wash. The physical cleansing of the skin, the removal of transient microorganisms, all happen while other things take place. This 20-minute wash achieved clean skin, clean dry linen, but at the same time maintained safety, dignity and all the while acknowledged a social Alan whose only means of communicating was with a slight nod of his head (Benner, Hooper-

Kyriakidis & Stannard 1999, p. 248). During this whole time Donna chatted to Alan, what was happening at home and how the Australian Cricket team was doing. In the case of Donna washing Alan I am reminded of Twigg's (2000) study, where some of her participants found the process of bathing a pleasurable experience because of its intimacy. One participant described such intimacy as 'peaceful' and 'cutting through the chaos of the day' (Twigg 2000, p. 399).

Washing the body in nursing is inscribed by sets of rules about bodily contact between strangers; rituals about where to start, and how many flannels and when to change them; or indeed whether it is culturally safe to attend to the body at all and that it is left to the family to attend. From such a location (Goopy 2006) rituals of cleanliness are wrapped around with sociocultural mores and other matters. Moreover, nursing has its own set of beliefs that intersects with all others.

Hence, we also see that Donna was not only washing the skin but inspecting the skin. In stopping for a moment, she speaks of another embedded activity such as the rules and beliefs about skin that informs understanding about skin perfusion, blood pressure, hydration status, the presence of pressure on the skin and body positioning. To do this examination of the skin requires an understanding of what to look for when viewing healthy skin. Taking this further, this inspection also requires the nurse to have an understanding of what abnormalities of the skin may look like, such as the presence of pressure injuries or irritation (Grealy & Chaboyer 2012, p. 106). Donna does not say anything, but all of this is embedded in an interruption in the unfolding events that indicated that the skin had been checked. To an outsider it may be seen as a silent pause, a break in activity, yet to those who have this habitus, such a pause signifies inspection has taken place. This inspection barely gets a mention in any documentation if what is seen is considered as 'normal'. Medicalised terms such as capillary refill—or documenting of pressure points, skin folds or observation of

insertion points for invasive lines such as a central venous catheter (CVC) or intravenous cannula—will be noted at other times. Yet all of this takes place in a simple pause in the flow of washing Alan's body.

Knowing the patient

Kraeftner and Kroell (2009, p. 161) suggest that personal hygiene exhibits a new dimension in the clinical setting. Another way of understanding this observation as revealing the knowledge embedded in this activity is the involvement of Alan the patient. Using Foucault's (1991) idea of docile bodies it could be argued that Alan lacks agency. It could be argued that Alan has very little choice in what he does or what happens to him while he is in the intensive care unit. Alan demonstrates his agency through nodding his head to questions and by the smallest of movements in his hands. Donna demonstrates her willingness for Alan to operate his agency by giving him the opportunity to tend himself; even though they will take much longer than if she was to do them alone. Take the example of Donna asking Alan to lift his hand to assist her. This demonstrates that the task of washing a patient is not just being done. Rather, through these little acts within the task is encouragement and an opportunity for gaining independence.

The account of Alan and Donna described not just the physical act of washing Alan's body, drying his skin and observing the condition of his skin. Rather this account demonstrated activities that are normally in the hind ground, suppressed and recessive (Munro & Belova 2010). In the ICU, hygiene and comfort happen frequently but they are often, as Munro and Belova suggest, moved to the hind ground and obscured by the objects of ICU.

In contrast to the previous chapter, personal hygiene is perceived in a different way. Firstly, I examine the space that Alan and Donna share. White (2009), in his

ethnography of ICU, talks about how bodies are unknown and made known by various cultural materials. My understanding of this is that the very objects that made the patient known and visible—such as the ventilator or the monitor—are cultural materials that bring meaning with them. In this case, the meaning is to the nurses of ICU and what such knowing and unknowing represents. White suggests that these very things represent a way of knowing the world. But I would argue they are also ways of knowing nursing. In White's case, he focuses on the material objects as a means of simply making the inner workings of the body known. He goes on to state:

> In order to accomplish this, the embedding of the patient requires the body to be processed into the fabric of intensive care, to become a malleable object that can be worked upon and in part understood through extension to multiple aspects of what constitutes identity as an intensive care patient. (2009, p. 121)

As with White's study, this field record reported activities in a typical ICU bay or space. The patient Alan is understood by the technology that is attached to him. These artefacts speak of the acuity of his condition. They make his frailty visible to family and friends. However, to the nurse, the limited number of materials attached to him also makes his medical condition known to the staff as well. They make Alan known as a stable or an easy patient. Alan, in this case because he is stable, has less ICU equipment attached to him,[50] the pace is slower and Donna has time to be attentive and intimate in this body work. Fullbrook and Grealy, from an ICU perspective, argue that personal hygiene is a basic right; however, this right can only be considered when not risking 'other therapies and rest' (2007, p. 188). Hence, this is an observation of Alan's right to hygiene while not putting his other needs at risk.

Hygiene a shared world

When the description above is compared to the description of the patient Nicole (found on page 64 of Chapter 3) and the situation presented to Karen the nurse. Each

[50] Alan is connected to cardiac monitoring, is ventilated through a tracheostomy tube, he has a central venous catheter (CVC) for medication administration, a nasogastric tube for nutrition, a urinary catheter and an arterial line for blood pressure monitoring and frequent blood tests.

item in, on and around Nicole informs the nurse of what the patient's needs are, the things that Karen will need to do and the care required .The multiple infusions and technology attached to Nicole demonstrates how critically ill she is. The technology found in the form of the ventilator, urinary catheter, dialysis machine and multiple pumps connected to invasive lines (peripheral and central intravenous lines, arterial lines) deliver vital oxygen, medication, clean her blood and monitor her condition. Each infusion pump provides medication that will hopefully improve the function of Nicole's heart, lungs, blood pressure and kidneys while supporting her until she is able to maintain these functions herself. Taking account of these things enabled the cultural materials of ICU to be used to know and understand the intensive care patient (White 2009). Similarly, the things found within the bay told the story of Nicole's condition and the care she required. My own experience as an intensive care nurse enabled me to unpack the meaning found in the objects in the bay, connected to Nicole and used by Karen to provide care and to enable Nicole to be made known and be understood. They also enabled me to interpret Alan as a patient of low acuity because of the lack of technology such as dialysis or multiple infusion pumps around his bed.

To the ICU nurse the machinery or technology in the bay represents ways of understanding Nicole and Alan's conditions. In my field notes I recorded that Nicole is constantly monitored. Though documentation of routine observations such as heart rate and blood pressure is common throughout many health disciplines, the documentation of the ICU patient includes these usual observations but also the documentation of the technology. This constant observation includes the constant monitoring of the technology: observing, recording and interpreting the information that the monitor and the ventilator provide. Monitoring things such as airway pressure, mean arterial pressure, and the monitoring of fluid volumes or calculating

exactly how many micrograms were required or administered for Nicole's weight of a particular medication such as an inotrope. White suggests that the infusion pumps, the monitors and the technology are all means by which 'the body can be understood or become legible' (2009, p. 125). Such legibility is a continuation of the biomedical approach to the body where understandings of the body can be reduced to what the pumps and monitors read, reduced to how much urine the patient makes or what their cardiac rhythm is doing. Whereas, in Alan's case, these observations are more in the background and confirm his stable condition.

Twigg's (2000) study on care work as body work is an example of how the body is discussed and made visible through the focus on the body or rather the declining malfunctioning body (2000, p. 392). It could be argued that nursing in such a technologically rich environment such as in ICU reduces the body to these parts and that documentation is the evidence of these parts. It is unfortunate that nursing practices occur within a system that values and holds the medical model in such high regard. The problem with this is that the documentation of care in the form of observations and the charting of infusions is one of the few means by which nursing is evidently there.[51] It legitimises what a nurse does in their everyday practice. Twigg, however, argues that 'good practice seeks to get away from this and to stress the person behind the superficial attributes' (2000, p. 392). Can Twigg's supposed good practice be a means of understanding beyond the superficiality of infection control practices and monitoring in ICU and explain what the nurse really does in intensive care with people and their bodies? It is my contention that these artificial

[51] Documentation is evidence that the nurse (and for that matter other health professionals) were there. The dominance of the medical model means that the focus of documentation is on health or lack thereof. The spiritual–psychosocial body is absent in notes or relegated to other professionals such as social workers and psychologists. Or alternatively nursing notes document such abstract terms as 'offer reassurance', which is often found in the nursing practice guidelines and instructions.

and superficial attachments to the patient, though vital and essential, are socially constructed and mask the body work that continuously takes place in ICU.

In comparison, Alan is not unstable and the focus of Donna's care is on how she performs his wash, rather than the frailty of his condition. Alan is similarly monitored for his heart rate, blood pressure and his ventilation, it is still attended to hourly (as recommended in the Nursing practice guidelines 2001, 1.8.5) despite his stability. Though he is completely dependent on machines and devices for breathing, coughing, nutrition and toileting (just as Karen is), he is not unstable; by contrast, the monitoring seen with Nicole is still attended to yet was less of a focus.

Body work = ICU work

During observations above, I wonder about the many layers to care. In the layers of understanding that surround this wash there are a number of ideals that are fulfilled such as hygiene, PAC, skin assessment, positioning to decrease risk factors such as ventilation-acquired pneumonia or thromboembolism, as well as how nurses are managing the socio-presentable body. In the case of both patients there was no discussion while I was present about the patients' social, spiritual and cultural needs. However, as I observed these scenes, their social bodies were made presentable with dignity and privacy, evidenced by the drawing of the curtains around the bay so that the large four-bed bay represented, even through the closing of a flimsy curtain, a private space where Nicole's or Alan's naked body could be safely exposed.

During body work conversation, or more commonly, lack thereof, the honouring of a private social space was demonstrated. In the case of Nicole the gravity and the seriousness of her situation is marked by conversation being kept to a minimum. In this account very little is said. The counting of '1… 2… 3…' by Karen to synchronise moving Nicole onto her side by the orderly and the assisting nurse in

this example was not discussed by the staff involved in this scenario. In this account of the care, Karen prepares herself to do the back wash by organising two colleagues, getting the necessary equipment and then preparing the patient for the back wash. As an experienced ICU nurse, the normality of this situation was such that I did not ask Karen about why she was doing a backwash to Nicole at this very moment. This line of questioning seemed too obvious from one ICU nurse to another ICU nurse. In establishing credibility as a data collector and participant in the study I wanted to create trust and acceptance. In comparison, Alan is an aware social being and Donna has a one-way conversation with Alan about the cricket and family. Similarly, in Twigg's study of body work, this chatter overcomes the intense intimacy and personal discomfort of body work and nakedness.

Alan and Nicole both require their hygiene needs to be met. Both Nicole and Alan required continuous monitoring, assessment and evaluation of the objective data that are displayed on the monitors and the ventilators. Both nurses responded to the auditory stimuli in the beeping of alarms from the monitor and ventilator and made interpretations of this data, and their observation of Nicole and Alan, making the necessary adjustments. At the same time, the nurses managed the objects in and around the bay, the monitoring leads, the ventilator tubing, intravenous giving sets going into the patient through CVCs, other invasive lines (indwelling urinary catheter for both and a peripherally inserted central catheter (PICC) line for Karen). While all this is going on there are also principles that are being adhered to about maintaining dignity of the naked body, maintaining warmth and correct body alignment, and then finally, the management of the environment.

In the ideal world, nurses would have a blank canvas, a landscape free from disturbance or distraction that adds yet another layer to providing personal care needs. When performing a back wash for Nicole, Karen is required to be cognisant of

her team members' occupational health and safety needs; if risks are present, how safe it is for them to move themselves and the patient, assessing their own personal effort at work on their body, and the necessary equipment or height of the bed. Moreover, understanding the meaning of a back wash is to understand the requirements of the unit. The staffing requirement and time needed to perform a back wash does not happen as a single unit, but rather in the context of all the other events happening to the other patients in the intensive care unit. The performance of a back wash took into consideration the resources available at the time. As stated at the beginning of this field note, though not at full capacity, the ICU felt busy. Therefore, Karen needed to negotiate performing the back wash by organising staff, such as a team leader. This negotiation with the team leader also had to take into consideration that the team leader was in the process of transferring patients out of the unit, preparing to transfer patients into the unit or following up on medical orders from the ongoing medical ward round in preparation for staff handover in one hour's time.

Body work = ICU work = infection control work

In looking at the physical act of providing for a patient's hygiene needs it becomes clear how hygiene moves from foreground to hind ground, depending on the acuity of the patient. Nicole's care foregrounded the management of the material objects and devices such as the arterial line and dialysis that were connected to her that make this backwash more visibly an intensive care activity. Because Alan is stable, the wash is foregrounded and the ICU attachments move into the hind ground (White 2009, p. 121).

Personal care work such as PAC and washing patients are frequent occurrences in the ICU (as can be seen in Appendix 5: Capital Hospital's Nursing Practice Standard 2001). PAC and washing a patient could include a range of activities from changing

the patient's body position, a massage,[52] moisturising the skin; or washing the skin with soap and water, emollients or hot towels, depending on unit policy. The physical act of performing this hygiene underpinned that these activities do other things that assist in the control and prevention of infection. It is presumed that position change will also decrease risk factors such as pulmonary dysfunction. Pulmonary dysfunction can lead to nosocomial pneumonia from being supine and incorrectly positioned. Venous thromboembolism and pressure sores can develop from immobility, have a greater incidence in ICU due to the nature of patient admissions, co-morbidities and the therapy (like the inotropic agents that Nicole has continuously infused into her body to improve her cardiac function). The final assumption about the provision of hygiene is that this is an opportunity to assess the patient's skin for signs of pressure, infection and perfusion (Krishnagopalan et al. 2002, p. 9).

The other purpose of personal hygiene and the full body sponge also relates to infection control. It is argued that meeting a patient's hygiene needs assume minimising infection; however, it is questionable as to how basic hygiene minimises a patient's infection risk (Baeur 2009, pp. 873–876; Parker 2012, pp. 841–842; Larson et al. 2004). During the wash Donna wears gloves for the entire procedure. As described in Chapter Three, gloves are required when there is risk of exposure to blood and bodily fluids. In this wash there is no exposure or even risk of blood or bodily fluids. Alan's body does not leak. Alan is also known to be not infectious because he is located in the four-bed bay of the general unit. There was no signage, thus suggesting that he was not considered infectious. As stated earlier, the four-bed bay is an open and communal space. The space has physical boundaries created by the privacy curtains between patients; when these are open it is one space, when they

[52] Simple massage refers to rubbing the skin to gently stimulate circulation. As part of the standard Bachelor of Nursing degree nurses are not routinely educated in therapeutic massage.

are closed there are four patient spaces. Each bay has its own objects, such as a blue trolley containing needles and syringes, their own charts, chairs, monitor and ventilator (see Appendix 4 for a typical floor plan of the bays and isolation room and Figure 4.2 for Nicole's floor plan). Even though this is an open space, from an infection control perspective this bay is considered as four discreet zones. The infection control team, when interviewed, described such a scenario when talking to another member of staff:

> *Well, can you imagine now that four-bed room is four single rooms within a room? That's how you now have to picture yourself and that's what we're trying to get that message out there that it's not a four-bedder ward. There are four rooms within this one room and we have to treat them as four single rooms and then maybe people can remember. (Final interview infection control team, lines 1174–1178)*

From this interview the infection control nurses demonstrate another perspective of providing care in the four-bed bay. From their perspective, each of the individual patient spaces within the four-bed bay is a discrete infection control space. Figure 4.2 shows the floor plan of Nicole's bay. The dotted line represents the edge of the bay, a space that is created with the use of the privacy curtains. The limit of each curtain is where the infection control team suggests is the limit of one space, beyond this space becomes another patient's space needing techniques such as the washing of hands to prevent cross-contamination should one cross into that space.

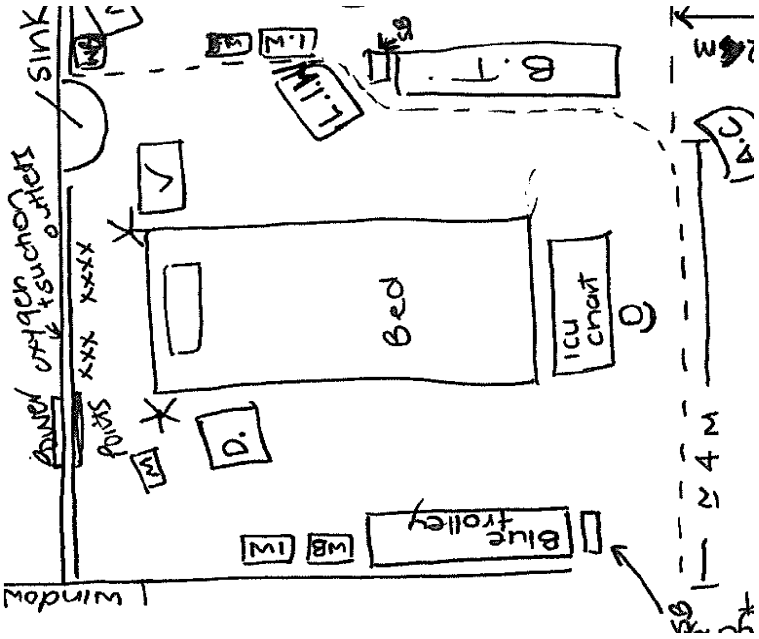

Figure 4.2: Floor plan of Nicole's bay

Another example of understanding about infection control is the way in which Donna disconnected the infusion from the infusion pump to thread the tubing through the gown so that Alan's gown could be removed. Patient gowns often have Velcro, press studs or buttons that enabled them to be applied around lines. In this case, Alan was wearing a normal gown and so to maintain his dignity, the infusion bag had been threaded through the gown. Donna did not simply disconnect the giving set from the cannula (though this is the easiest way of doing this task). Although doing it this way was more time-consuming she went for the option of keeping an intact giving set and not breaking the connection.[53]

Feel for the game

In these observations of Nicole and Alan, like Evans (2006) I am 'attempting to elaborate on Bourdieu's theory of practice by going beyond the unexamined idea of learning–as-inculcation' (2006, p. 247). In understanding this account and making sense of its meaning I firstly explored its theoretical meaning. I have drawn on the

[53] The practice of not disconnecting the giving set was widely accepted in nursing to be a means of minimising the risk of infection associated with intravenous cannulas.

body of literature that shapes and epitomises the ideals of what nurses do to, and even with, ICU patients when doing the most ‘simple of tasks’, such as attending to their patients’ hygiene needs.

In the idea of the feel for the game Bourdieu (2003a) captures the hidden and inherent tasks presumed to be simultaneous, yet without recognition of their simultaneity. In the feel for the game, the actions that constitute practice are no longer articulated or thought about; and in unpacking the feel for the washing or turning of a patient, implicit rules are made more evident. Rules that are created around the value of the breathing tube, the various technological attachments, the correct bodily alignment, occupational safety and the rules around conduct of hygiene for an unconscious or dependent patient are all hidden in the term, the ‘wash’.

The game in this account is nursing practice. Bourdieu explains that the game or practice can be understood as an equation [(habitus) (capital)] + field = practice (Bourdieu 1984, p. 101). In this example, the wash is represented as a contested space. On the one hand the wash is essential, but on the other it is devalued and labelled as basic work (Whitely et al. 2000). When such work is viewed as habitus, the work becomes the ‘common framework within which the members of the group understand their own and each other’s actions’ (Sulkunen 1982, p. 108). However, practice is influenced by capital—economic, cultural, symbolic, and social—which represent the power of a person within a field (Rhynas 2005, p. 181). The cultural and symbolic capital or power in relation to the ICU patient needs are influenced by nursing practice standards, nursing and ICU knowledge, as well as the acuity of the patient.

These observations also demonstrated the different fields, capital and habitus between nursing and infection control. In the accounts of the care of Alan and Nicole the focus is on performing a perceived basic form of care in the context of the needs of an intensive care patient. Their individual conditions make the actions and the outcomes of merely washing skin appear different. However, infection control practitioners have a different take on this situation. They perceive this example of care in a four-bed bay as one of containment, where the nurse must behave as if each bed in the bay is an entirely different space. Despite these differences, nurses' infection control practices are embedded in their practice as the sum of field, capital and habitus.

The difficulty in describing and interpreting the field notes in this way begs the question of participant observation. Bourdieu causes me to question 'objectivation' and that the most 'radical' and self-critical means of participant observation is to objectivise self as well (2003c). I realise in this account that I am submitting my own observations, with everything I know and understand as an ICU nurse, the social condition that generated this observation, and therefore am demonstrating the limits of my own mind (Bourdieu & Wacquant 2002, p. 68). This observation is also a question of epistemology. In terms of my relationship to the research it is argued that the 'inquirer must grasp the meanings that constitute the action' (Schwandt 2000, p. 191). However, I need to do this with caution as my relationship to the participant is that of the academic (or in this case the researcher) (Bourdieu & Wacquant 2002, pp. 70–71) and that this relationship in terms of truth telling in the interpretive epistemology could be argued as academic fallacy. As is the premise with all qualitative research, analysis and interpretation cannot be considered as value-neutral. I do interpret the data from the position of academic; however, the purpose of unpacking the multiple layers was to understand what knowledge was embedded

within nursing practice. Such analysis is vital for the understanding of nursing and the practice of infection control.

Conclusion

The two accounts of personal hygiene found in this chapter demonstrated the diversity and the individuality within the purportedly, homogeneous nature of personal hygiene and body work. What is represented in this chapter is the homogeneous landscape of the non-infectious patient, where care is considered normal and everyday. Douglas described dirt as matter out of place and goes on to state that dirt:

> implies two conditions: a set of ordered relations and a contravention of that order… where there is dirt there is system. Dirt is the by-product of a systematic ordering and classification of matter, in so far as ordering involves rejecting inappropriate elements. The idea of dirt takes us straight into the field of symbolism and promises a link up with more obviously symbolic systems of purity. (2002, p. 36)

In these two examples of care, even within the acuity of Nicole and Alan, with the multiple lines and the ventilator hushing in the background, 'dirt' has been managed as part of the routine activities of the nursing staff. Nursing care is orderly, normal, matter is not out of place. Infection control in this instance is hidden by the normality of the space and the routine nature of the care. As Douglas suggested above, for dirt and pollution beliefs to exist in this normal everyday care requires ordered relations and contravention to that order. Infection control is hidden because the work is orderly and the activities do not challenge the notions that organise pollution beliefs. Though there were always infectious agents present and polluting substances like faeces, urine and spit, these items did not contravene the accepted system of order within nursing. For these reasons, infection control falls into the hind ground because matter is contained routinely. What is seen in this account of practice:

> is an effect of actions and interactions which are shaped, simultaneously and in equal measure, by the habitus and capital of agents, as well as the context and

> dynamism constituted by their shared participation in a common ‘game’ or ‘market’ (field). (Crossley 2003, p. 44)

In the chapter that follows, I move away from the ordering of routine care and explore when routine becomes matter out of place.

CHAPTER FIVE: MATTER OUT OF PLACE

Introduction

In this chapter I specifically examine how nurses discuss and demonstrate what they perceived as normal everyday infection control practices. In the previous two chapters I revealed where infection control is placed in the context of normal, everyday, intensive care practices. In these chapters I demonstrated how the knowledge's are embedded in practices and how infection control practices become hidden from view.

In this chapter I examine how the knowledge that is embedded in practice focuses on routine standard precautions, in particular two aspects of standard precautions—hand hygiene and the wearing of protective attire to protect the staff member from blood and bodily fluid exposure. These practices are not hidden as they are in full view of the staff. Staff either wash[54] their hands, or they do not. They either put on protective attire in the form of gloves, or they do not. To demonstrate these infection control practices actual accounts of the nurses doing routine care and describing their infection control practices are considered. In this chapter I explore how these two aspects of standard precautions have become part of the orthodox way of managing the patient by looking at the different things that are termed infection control. I frame actual practices against the backdrop of how infection control as a program or system is identified within the hospital and health care environment in general.

In this chapter I explore how the participants demonstrate that infection control is about personal space or subjective space. Lawler states that nurses are centrally concerned 'with the object body (an objective and material thing) and the lived body (the body as it is experienced by living people)' (1991, p. 29). Lawler's focus in this

[54]Hand hygiene now not only includes washing hands with running water and soap but also the use of antiseptic hand rubs such as alcohol-based hand lotions.

case is the patient and she states that nurses are concerned with the objectified body of patients and also how that same patient experiences illness, recovery and care. In chapters two and three it is clear the objectified patient is how nurses' knowledge is built into practice; that this objectivity also hides from view knowledge about practice because it is based on the rules around routine care of the patient, hiding infection control practices within these rules.

In this chapter the subjective experiences of nurses are explored, through interview data and field work, as to how they manage different aspects of practice more obviously thought of as infection control. Again, these practices are not remarkable in the spectrum of ICU care and work, continuing as they do within the remit of the routine, standard and the everyday. Infection control practices in this technologically rich environment also become obscured from view due to the mundane nature of body work. Infection control is also hidden from view as these routine acts of care for the patient are often called basic care or fundamental care, where infection control practices and bodily care co-occur. Nurses make infection control decisions within these bodily care practices; in particular, such as whether to wear protective attire such as gloves or goggles or when to wash their hands in the midst of managing an intensive care patient. However, from observation and interview I noted that infection control practices are absent or minor conversations in the dialogues of nurses when compared to the technico-scientific conversations about patients. It is while performing bodily care and while there are technical foci that nurses navigate this space ensuring that practices of intensive care nursing are adhered to.

My intent in exploring the nurses' accounts of practice in this chapter is to continue my focus on the routine. This is done as a means of understanding how the body is viewed, understood and read in a particular way, through the lens of a medicalised body and ICU care. Infection control is problematic as it is hidden from view by the

acuity of patient and the routinised, everyday and taken for granted nature of many things that are considered to be infection control, such as hand hygiene. This simplicity of practice is derived from handwashing being seen as a basic and routine activity. That is, the task of handwashing, or hand hygiene as it is now referred to, is a skill that many health professions learn and that everyone, irrespective of professional status, is expected to perform. In this chapter, nurses' infection control work is again problematised by questioning the simple things that intensive care nurses do. This is accomplished by building an account from field work, comparing this with the rules of infection control found in the *Australian infection control guidelines for the prevention of infection in health care settings* and how these are understood in the context of what the nurses say they do as a part of their routine care.

Matter out of place

From the position of Mary Douglas (2002), dirt is matter out of place that symbolises disorder. She goes further to describe that this matter that is out of place is not an absolute term but rather an individual perception. In this light she further describes how our ideas of dirt have been influenced by science and the perception of pathogenicity. However, Douglas questions if objects in themselves can be dirty; that is, can food, clothing or utensils be dirty in and of themselves (2002, pp. 36–37). There may be pathogenicity or infectious agents present but this does not make such objects dirty. Take, for example, faeces, which many cultures consider as dirty and yet many of us would still purchase a bag of faeces (cow manure) for our roses and vegetables gardens. Our perception of pollution and dirt is a means of organising things into items that can be categorised and items that cannot be organised because they do not fit. In the case of blood, blood in itself is not dirty. Blood given to a patient in the form of a blood transfusion is expected and assumed (in Western

Culture) to be clean and therefor pure. While some blood contains pathogens and some blood could potentially contain pathogens, not all blood is dirty. Blood exemplifies our pollution behaviour, for instance, in many cultures menstrual blood is considered as impure while other blood is not. Menstrual blood is socially defined as impure, resulting in differential, exclusionary treatment for those who menstruate. In contemporary society how we think about blood has altered because of blood borne viruses such as HIV. Since the HIV era, all blood is now considered to be dangerous and impure. Blood now symbolises and represents potential impurities. It is, as Hamilton (2013) suggests, as if blood has been transformed through cultural magic. All blood is considered dirty, and its impurity and dangers are avoided in the medical and health world through the introduction of universal precautions and now standard precautions.[55]

In this offence against order and the recent development of pollution behaviour, much can also be said about the conceptualisation of risk and danger. Another way of understanding the post 1980s' HIV and AIDS concerns is to conceptualise of dirt by how it is more commonly referred to as presenting risk and danger. Dangers are both known and unknown and are publicised to protect the public (Douglas 1992, p. 6). Standard precautions were put into place for everyone from exposure-prone activities and the dangers of HIV, AIDS and other infections. These understandings, thought to have been evolutionary in nature (Douglas 1996; Curtis 2007), work to form a risk assessment/analysis culture that aims to protect everyone. In understanding infection control as a means of minimising the risk to health care workers and patients it is important to also understand that these practices are about controlling matter out of place.

[55] I am not necessarily arguing an abandonment of standard precautions for blood and bodily fluids, rather troubling the notion that blood is always already dirty.

Standard precautions

Standard precautions from a hospital or health agency policy perspective are about controlling matter that is out of place. This matter that is being controlled includes such things as blood, bodily fluids, non-intact skin and mucous membranes (DHA 2004, section 2.2). This emphasis on blood and body fluids arose in the mid-1980s during the emergence of HIV and AIDS, when universal precautions were implemented. The use of universal precautions as a strategy was developed by the CDC and further developed by the National Health and Medical Research Council (NHMRC) and Australian National Council on AIDS (ANCA) in the mid-1990s and has since become known as standard precautions.

As a practice these standard precautions are implemented irrespective of perceived or known risk (DHA 2004, section 2.1). The policy has the position that all blood and bodily fluid is, or is potentially, infected with diseases such as HIV, AIDS and hepatitis B and C. However, the standard goes on to describe something more than just blood and bodily fluid risk. Standard precautions, as a strategy, are designed according to the guidelines for the 'successful minimisation of health care associated infections' (DHA 2004, section 2.1). This suggests that standard precautions are a means of controlling or minimising health care associated infections linked with blood and bodily fluids. The matter that is out of place is blood and bodily fluids. However, health care associated infections or nosocomial infections are more broadly referred to as infections resulting from hospitalisation and not limited to blood or bodily fluid-based infections. More commonly, health care associated infections (HAIs) include infections from bacterium such as *Staphylococcus aureus* and enterococcus. The Australian Council on Healthcare Standards (ACHS)[56] is the peak body responsible for working with health professionals to assist health care

[56] Hereafter The Australian Council on Healthcare Standards with be referred to by its official abbreviation of ACHS,

organisations review standards, clinical performance and outcomes (ACHS 2012a, p. 4). The ACHS *Australasian clinical indicator report* (2012a, p. 4) provides a broad range of reports on clinical indicators, which include infections associated with hospitalisation. The majority of infections associated with hospitalisation that ACHS report on are as a result of interventions such as surgery or invasive central lines (2012a, pp. 51–55). The report goes on to describe occupational exposure to blood and bodily fluids as a separate category of infection control (2012a, p. 55). The way that health care associated infections are reported on are inclusive of all infections associated with hospitalisation and not limited to just blood and bodily fluids in health care environments. The work practices suggested by the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) imply both blood-borne and other infections. These guidelines recommend techniques such as the use of aseptic technique (DHA 2004, section 2.2 and section 6.1; Appendix 6: Aseptic technique from Capital Hospital's Nursing Practice Manual). However, this is more about controlling the spread of transient bacteria found on the skin than about blood and bodily fluids associated with the presence of HIV and other blood-borne viruses.

For this reason, in the context of hospitals, matter out of place is considered to be both infections associated with blood or bodily fluids and also any infection acquired in a hospital or as a result of hospitalisation. Though the emphasis has been focused on preventing the transmission of HIV (and its consequence, AIDS), there is a mixed agenda of concerns evident in how these techniques are framed. Therefore, what is found in the discussion about standard precautions is a mixture of views about concern for blood and bodily fluid, but also an awareness, in some cases, that it is as much about mixing bacteria from different sources.

The work practices considered as standard precautions that act to contain matter out of place include as a minimum standard aseptic technique, protective attire, personal hygiene (including hand hygiene), safe handling and disposal of sharps and clinical waste, environmental controls and provision of support services. Hence, the emphasis is on blood and bodily fluids as part of the CDC approach to protect staff from viruses such as HIV, hepatitis B and C. However, this approach focused on those infected with these viruses and so these individuals were singled out (CDC 1983). They were identified as being contagious, impure, evil and having matter out of place when approached by health care workers using protective attire and by placement in an isolation room or unit (Lupton 1994; Garner et al. 1996; Sontag 2002). In 1988, following the lead of CDC in the United States, the infection control guidelines were expanded to include all patients and not just those identified as diagnosed with HIV or AIDS (CDC 1987, Leaver 1996). In 1990 these were further refined to include universal protection from all body substances to take into account non-blood-borne pathogens such as respiratory illness (ANCA 1990, Leaver 1996). Hence, these infection control practices became acts of concern about controlling microbes in the context of the health care environment and not just about blood and bodily fluids. Despite these changes in knowledge, the guidelines (DHA 2004) are still worded in a fashion that focuses pre-eminently on blood and bodily fluids. The guidelines list practices such as aseptic technique, personal hygiene and the wearing of protective attire such as gloves. The hierarchical organisation of matter from these guidelines is on blood and bodily fluids. In this case the commonly held belief, or doxa, is that all blood and bodily fluids are infectious (DHA 2004). It is important, however, to be clear about what is considered potentially infectious. HIV is found in blood, semen, vaginal fluid and to a lesser extent breast milk (CDC 2010; AIDS Australia 2011). Hepatitis B is found in blood, semen and vaginal fluids (CDC 2012,

Hepatitis SA n.d.); however, hepatitis C is found only in blood. It has to be acknowledged that all of these resources identify the potential for other bodily fluids and substances could have HIV, hepatitis B or C present if there is blood present in that fluid. There is an established hierarchy of dirt in relation to blood, however, as the infection control guidelines (DHA 2004) reference the use of standard precautions for health care workers as protection from blood and bodily fluids. What these guidelines actually alert workers to is protection from blood, semen, vaginal fluid and anything that is contaminated by blood.

Nurses illustrate in the following accounts that standard and routine care of a patient is not just about blood (which is the focus of the guidelines [DHA 2004]). It is also about preventing an individual's pathogens being transferred to another through a range of practices. These practices are to prevent matter being out of place. The reality is that dirt or infectious agents exist on humans. In the context of intensive care these infectious agents that exist in and on the patients are not necessarily more virulent than any others. Rather the body's response to these infectious agents is reduced or affected by a range of therapies that occur in intensive care units. Matter has easier access to being out of place. For example, skin normally has *Staphylococcus aureus* present at all times and is not out of place. However, *Staphylococcus aureus* is out of place when it is found in the blood or in a wound.

Though the guidelines changed in 1990 from blood, to blood *and* infectious agents (ANCA 1990), the wording of these guidelines continues to focus on blood and bodily fluids. Using the guidelines, examples of matter—being blood, bodily fluid and non-intact skin and mucous membranes—in this account are analysed using a hierarchical approach to the dirt or matter that is out of place to explicate how the doxa and orthodox practices are understood in the context of ICU practices.

How nurses deal with matter out of place

To understand infection control as a practice it is important to understand that the practices that the nurses describe are about controlling matter that is out of place; that is, the bodily fluids and how nurses manage non-intact skin and mucous membranes. This section is about how nurses conceptualise this control of matter and prioritise the management of this matter in the context of an ICU patient.

Adherence and compliance to the infection control policy and guidelines must also be understood as the accepted or orthodox norm for management of infection control. Orthodox nursing care in Australia requires the adherence to competency standards that form part of nurses' ongoing ability to practice as a nurse (in both registered and enrolled nursing) and as part of their annual renewal of registration and enrolment with the Nursing and Midwifery Board of Australia. These core competencies enable nurses' to assess and guide their competence and enable the Nursing and Midwifery Board of Australia to ensure ongoing competence. In relation to infection control, competence in this area includes statements such as 'maintains standards for infection control' (NMBA 2006, p. 12) or 'uses best available evidence, standards guidelines and evaluates nursing performance (NMBA 2006, p. 4) or alternatively 'adheres to standards and procedures related to restraint, infection control and the administration of therapeutic substances' (ANMC 2002, p. 8). In addition the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* document states it 'has a broad scope and aims to establish a nationally accepted minimum standard for infection control' (DHA 2004, section 1.1.1); that is, all nurses must adhere to infection control standards. The adherence to infection control standards implies competence both at an individual level and through compliance to the National Nursing and Midwifery Board of Australia and is based on standard precautions for a patient who has an unknown infectious status.

How nurses perceive matter as being out of place.

In Chapter Two I provided examples of how the participants defined infection control practices. In those examples, it was seen that all the participants saw handwashing as vital, whether that be through the physical act of washing hands or using the variety of alcohol-based hand rubs to decontaminate their hands. The participants also spoke of an attitude of being aware that they could spread infection and that they were attempting to minimise infection. The participants also included the use of protective attire such as gloves, goggles and gowns as a strategy to minimise the spread of infectious agents. In taking such a stance, participants already demonstrated and described how hand hygiene and the protective attire set out in standard precautions were part of their orthodox understanding of infection control practices.

The accepted expectation is that nurses comply with these standards when faced with blood or bodily fluid and non-intact mucous membranes and skin. But the priority in providing ICU care is also about the accepted doxa of ICU maintaining a safe environment for critically ill patients. At times, these expectations were competing and used opposing knowledge's in the care of an ICU patient. This is illustrated by the nurse Beatrice, who describes how she always used standard precautions. However, when faced with a decision of whether to wear protective attire such as gloves when faced with a patient at risk she chose not to. Beatrice states:

> *So, I use standard precautions, I would say at nearly every instance when I'm touching a patient. The only time I wouldn't—and, for instance, this morning, a man was going for his endotracheal tube and so, I reached over and grabbed the tube and pulled his hands away and then I said to someone, "Can you get me some gloves please". So, I really don't like doing anything to patients before I've got gloves on. (Beatrice, final interview lines 71–76)*

In this example Beatrice is faced with a ventilated patient attempting to remove their own endotracheal tube[57], potentially compromising the patient's respiratory status, damaging the patient's trachea as well as requiring the breathing tube to be reinserted by a doctor. So when faced with the decision of being compliant with the minimum standard in the infection control guidelines of standard precautions and protecting herself with the use of gloves from potentially infectious bodily fluids[58] or mucous membranes, she demonstrates a different hierarchy. This hierarchy is relevant in the care of the intensive care patient and evidence of a new and competing knowledge when undertaking infection control practice. It is an example of *heterodoxa* where the established view from the infection control team was that infection control, that is protection of self and others, should always be first. I raised the issue of emergency-like situations to the infection control team and used the example of patients at risk of extubating themselves, as was the example with Beatrice. Members of the infection control team stated:

> *Infection control should be second nature*
>
> *Nature yes, common sense … You know washing your hands, are you going to see the consequences … (of) a surgical site infection, a bloodstream infection … ventilation-acquired pneumonia …I don't know // personally I just wonder how much … rote that you do this, you wash your hands // You know, I mean a pilot doesn't go and hop in a plane and just take off. He goes through whole checklist. (Interview two with infection control team lines 322–335)*

In this instance the infection control team demonstrated a commonly held belief or expectation that everyone can wash their hands and don gloves prior to providing care. In the case of a patient potentially self-extubating, there is no time for a nurse to wash their hands and don protective attire in the form of gloves and even goggles. The actions of a nurse in this case were instantaneous. In Beatrice's example she stated that she does not like not using gloves but she made a choice. Fox suggests

[57] Self-extubation is the unplanned removal of the endotracheal tube by the patient.
[58] Bodily fluids in this example include respiratory secretions (sputum), mouth secretions (saliva).

that choice in relation to risk ‘may be temperamental or unconscious, or collective, as opposed to rational or individual’ (1999, p. 24) and therefore choice during a risky situation as described by Beatrice was all of these things. This is in stark contrast to the infection control team’s views that infection control occurs by second nature and with automaticity of practice. Crook suggests ‘that ritual order and order of daily life were inseparable and accounted for in terms of the danger threatening both’ (1999, p. 166). In other words, Beatrice’s hierarchies of perceived danger were inseparable. On the one hand, there was the need for protection, but on the other hand was the need to protect the patient’s airway patency through the breathing tube. It was a risk, yet an individual choice in this situation. This issue was further muddied by the infection control guidelines acknowledging that a failure to provide care during an emergency may be a breach in a health care worker’s duty of care (DHA 2004, section 10.4). Consequently, individuals are derided for choosing not to adhere to the guidelines. Alternatively, in following infection control guidelines staff could breach their duty of care responsibilities as set by guidelines for maintenance of airways, making them liable for these failures.

Standard precautions recommend hand hygiene, the wearing of protective attire such as gloves and goggles to minimise exposure of the health care worker to blood and suspect bodily fluids. Moreover, in this example, there is potential, yet minimal risk to Beatrice being exposed to potential pathogens. Should Beatrice’s hands be exposed to blood and bodily fluid in this example then she would be able to perform hand hygiene afterwards and potentially minimise her risk of acquiring a blood and bodily fluid borne infection. In her discussion she focuses mainly on gloves, but does not even mention the potential risk to her eyes.[59] However, the infection control team focused entirely on the adherence and compliance with the use of handwashing and

[59] Her eyes represent an example of mucous membranes.

likened such practices to the automaticity of a pilot. The expectation was that staff should automatically be able to do infection control practices within everyday practice. Such doxa offered no explanation of how this situation could be avoided by choosing to adhere to the infection control policy, perform hand hygiene, donning gloves and goggles first and then prevent the endotracheal tube from being dislodged. Both examples demonstrated a somewhat apocalyptic-style of belief system. Beatrice demonstrated the necessity of tube care—the preservation of the endotracheal tube staying in place[60]—versus the infection control team adhering to the preservation of infection control policy, in particular, standard precautions that protect both patient and staff. The infection control team also demonstrate an ideology that infection control should be second nature or common sense (*orthodoxa*). This is apparent in Beatrice's explanation as she goes against her own beliefs and chose to not wear gloves. To date, these practices are considered as acts of non-compliance; however, by understanding infection control as a practice from the perspective of matter out of place, variations in practice can be viewed as arising from competing values.

Vivian and respiratory care

In the data that follow, the reader becomes quickly aware of the competing values at play in controlling and managing matter out of place. It is my contention that during moments of care, nurses do not *deliberately* choose to go against the infection control guidelines and therefore be non-compliant in their practice. The data that follow demonstrate that the attention of the nurse is not on a single practice, called infection control. Rather, at any given time multiple practices are taking place and

[60]If the patient was to self-extubate prior to being medically stable then the patient could potentially go into respiratory failure and the endotracheal tube may be unable to be reinserted and the patient may die.

there are many forms of knowledge embedded in those practices that appear as a unitary episode of nursing care.

> *Vivian has been admitted to the unit 6 days earlier with sepsis of unknown origin. All that was understood was that something had been going on in his abdomen. He was making slow and steady improvements; yesterday they inserted a tracheostomy tube as he was going to need on-going support with his breathing through the ventilator.*
>
> *It was afternoon handover time, Yosef had been caring for Vivian and Katrina had just come on for the afternoon shift. The family of Vivian had just left and so this was Katrina and Yosef's opportunity to change his position. Yosef and Katrina removed the pillows behind Vivian's back, moving him gently they move his hips and shoulders and then raised the head of the bed so that he is sitting more upright. As they do this a bubbling sound could be heard coming from Vivian's mouth. Quickly grabbing and applying a glove from the top of the ventilator, Yosef reached for the Yankauer sucker and suctions out Vivian's mouth, removing the brown bile-like liquid bubbling out of his mouth. Grabbing a disposable wipe he gently wipes Vivian's face, the brown bile-like fluid has flowed down his face, collecting along the tracheostomy tube dressing and tape and rests along Vivian's neck to the pillow. As he does, Yosef stares, intently watching Vivian's breathing pattern, listening for any further bubbling sounds.*
>
> *Katrina "Shall we change his tracheostomy[61] dressing?"*
>
> *"Have you got time?" asks Yosef.*
>
> *With a nod from Katrina, Yosef leaves the bay and collects equipment from the general trolley. Returning he places the equipment (tracheostomy tape or strappit and dressing) on the bed. Katrina is on one side of the bed and holds the tracheostomy in place—she does not move. Yosef is on the other side of the bed, he unties the tracheostomy tape. Moving over to the bin he carries the bin back to the bed and puts it close to the bed. He then proceeds in removing the tracheostomy dressing.*
>
> *"It looks alright, I'll just give it a wipe over with wet gauze" Yosef says, as he speaks he opens a packet of gauze swabs, and squirts sterile saline onto the gauze and then wipes around Vivian's neck removing the bile-like liquid from his neck (not the actual tracheostomy site). Inserting the dressing under the tracheostomy, Yosef states "Gee it's tight".*
>
> *"Do you need forceps?" replies Katrina.*
>
> *"Forceps didn't help this morning, fingers did it" all the while Katrina supports the tube so that it stays in the one place. Yosef continues to gently work the tracheostomy dressing under the tracheostomy tube.*
>
> *"Can you hold?" asks Katrina.*
>
> *Yosef holds the tracheostomy tube from his side and Katrina manipulates the*

[61] Tracheostomy dressing – technique of two people attending to the dressing. One person to hold the tracheostomy tube in place while the other removes the tapes that secure the tracheostomy to the patient and also attend to the dressing and then replace the new tapes or strappits.

dressing on her side, reaching across the bed she collects the tracheostomy tape and begins threading it through the front of the tube and then threads it under Vivian's neck. Holding the tube with one hand Yosef reaches under his neck, feeling for the end of the tape. Collecting it he attaches it to the tracheostomy tube on his side. As he does this Katrina is asking if she needs to adjust her side so that it is secured on Yosef's side

"I'm just going to make you cough" Yosef tells the unconscious Vivian.

Using the inline suction system he feeds the suction tubing into the tracheostomy tube and makes Vivian cough.

"It's the same stuff!" Yosef comments [meaning the same brown bile-like fluid which they had wiped from Vivian's neck was found in his breathing tube]. Yosef gets a stethoscope and places them to his ears. As he does so he asks Katrina, "shall we just put a pillow under his head?"

As he says this he lifts Vivian's head. "Shall we get a clean pillow?" // [Noticing the brown stain on the pillow]. Katrina removes the pillow and places it on the chair and grabs the pillow at the base of Vivian's bed and places it under his head. Yosef lifts as Katrina brings the pillow under his head and slides it into place. Taking the face cloth from his brow Katrina wipes Vivian's face while Yosef places the stethoscope on Vivian's chest and listens to his breathing.

Staring at the ground Yosef appears to concentrate and focus on a point on the ground to enable him to hear the sounds through the stethoscope. "It's a bit quiet! I'll go get the doctors".

This account of care demonstrated the many dynamic processes that happen in the intensive care unit. The task-based activities that take place during this account can be summarised as: pressure area care, dressing change, tracheostomy tube care, and respiratory assessment. These tasks would have been noted on the ICU chart as Position – Back, suction – Brown –bile-like ++, ↓↓ AE (decreased air entry). By taking this task-based approach what Yosef and Katrina set out to do at the beginning of this account was to provide pressure area care by changing Vivian's position. In this account one can acknowledge that there is a wide range of knowledge, processes and skills that are activated. First, there was the task of turning a patient to assist with pressure area care, which then proceeded to a multitude of activities that required nurses Katrina and Yosef's actions.

The events that took place while turning the patient were that Yosef and Katrina found that Vivian appeared to have a small vomit of the brown bile-like fluid, which

was suctioned out of his mouth using the Yankauer sucker (oral suction tube). The brown bile-like liquid rolled down Vivian's face soiling his face, tracheostomy tape and dressing and then the pillow under his head. A decision was made to change the dressing and tape. The most obvious first aspect was the care of the skin to remove the bile-like liquid from his face, then the changing of the tracheostomy tube dressing and tapes, the suctioning of mouth and tracheal secretions, as well as ongoing observations about the condition of the patient.

The conversation during this care was brief, direct and included simple observations such as 'it looks good', meaning the tracheostomy wound was healthy in appearance, there were no signs of inflammation or infection, the stoma was not actively bleeding; all observations made in the context that the tracheostomy tube was inserted only the day before.

While this was all going on, Yosef was also observed watching the patient's respiratory function by observing the patient's breathing pattern and observing what was happening to the patient on the ventilator. He also uses a stethoscope, listening for changes in the effectiveness of Vivian's respiratory function. Based on what he saw Yosef made the decision to provide endotracheal suction, watching both patient and ventilator, listening without and with the stethoscope for changes in Vivian's respiratory function. The decision was made to do endotracheal suction using the closed suction set that was already connected to the patient. It was observed that the tracheal solutions were similar to that which they had observed in his mouth. During the whole time the patient was observed closely by Yosef, who at times appeared to focus on points on the floor or at the patient's chest to focus his visual or listening ability.

During this whole time gloves were worn, as hand decontamination had happened well before the procedure, but not immediately before the procedure. In deconstructing this account for the knowledge of infection control and practice embedded in this account, there were a number of things other than the presence of gloves or the lack of immediate hand decontamination prior to the procedure that came to notice. Questions included aspects such as the manner of changing of the tracheostomy dressing and tapes where the procedure required aseptic technique. The bin was moved into place and neither the gloves were removed or hand decontamination observed.

However, this account provided evidence of many forms of matter out of place. From an infection control perspective, the absence of hand hygiene and the style of dressing technique demonstrated the potential for matter out of place. Yosef and Katrina's actions were focused on tube care, that is, protecting an endotracheal tube from becoming dislodged or falling out and ensuring that the patient's respiratory function was adequate. Then by making the assessment between the presence of vomit in the patient's mouth and then tracheal secretions and analysing whether this has anything to do with the patient's breathing sounds registering as quiet when listened for by a stethoscope.

As with the previous chapters, there were a number of hidden infection control practices closely linked to the practice of managing an endotracheal tube[62] and it could be argued that Katrina and Yosef's demonstrated techniques that are poor or non-compliant with best practice. An alternative to labelling this as an episode of non-compliance, it is important to appreciate the entire event as an understanding of

[62] The hidden infection control practices include: respiratory care (care of the endotracheal cuff, care of the breathing tube closed circuit tracheal suction, and also the knowledge of the incidence of VAP); care of the tracheostomy wound (dressing change procedure, frequency of dressing), position changes and having the bed elevated to decrease incidence of VAP, risk of aspiration; and oral suction (Whitely et al. 2000; Aboela et al. 2007, Cuthbertson & Kelly 2007; Lawrence & Fullbrook 2011)

infection control with/in nursing practice. The tube care that took place for Vivian was partly routine; by this I mean that tube care happened every day in ICU, as does turning patients, observation of respiratory function and dysfunction. However, making sense of this as knowledge important to the total care of Vivian, rather than instances of compliance or non-compliance with best practice by the *Australian infection control guidelines for health care workers* is more central to the questions underpinning this study.

Protocol, practice and other matter out of place

In the previous section's field notes, it is possible to define what happened as an episode of non-compliance with infection control procedures. The elements of standard precautions that are claimed to prevent the spread of infection take place through hand hygiene and the wearing of personal protective attire such as gloves or goggles. However, when looking at the observational text, what is understood from this account is how infection control practices are enacted in a dynamic way.

In contrast, the nurses in the next observational excerpt were concerned with stomach contents, the same bodily fluid as in the case of Vivian, however it was dealt with in a different way and considered not to be matter out of place by the nurses in the following observation.

> *Sandy has just completed charting Gough's observations, and moves back to the trolley and collects from the drawer a plastic measuring cup, catheter tip syringes and more gloves. Placing the cup on the ventilator shelf to her right she applies the gloves, places the pump to hold, disconnecting the feed giving set, she holds the end of the feed set and the end of the nasogastric tube in her hands. Connecting the catheter tip syringe to the nasogastric tube, she pulls back on the plunger aspirating gastric contents. The syringe fills with milky lime green liquid. Disconnecting the syringe she holds the nasogastric tube upright with her left hand almost level with the height of the patient's head and squirts the gastric contents into the plastic measuring cup. Reconnecting the syringe, aspirates the contents of Gough's stomach. This is repeated three or four times, each time getting a full syringe of the milky lime green liquid of gastric contents. At that point Clara returns to the bay.*

> ***Sandy****: "What are we doing with the nasogastric fluid? What are we returning? Could you get me another dish from the trolley?"*
>
> *During this conversation Sandy continues to syringe gastric contents from the nasogastric tube and squirt it into the dish.*
>
> *Clara takes over so that Sandy can go to in-service education. Applying gloves she continues to aspirate the contents. Then once she is unable to remove any more nasogastric aspirate, she returns 120mls of fluid back into the stomach (protocol at the time of the research). Reconnecting the nasogastric feed she takes the container of nasogastric contents and disposes of it down the drain of the sink next to the bay. Rinsing the container and the syringe she returns them to the drawer. (Week 3 observations lines 554–585)*

Sandy was dealing with the routine nasogastric aspiration that took place every four hours (see Appendix 5: Capital Hospital's Nursing Practice Standard 2001, p. 1). In this account of care both nurses wore gloves to perform the nasogastric aspirate, as the policy recommends this to prevent the risk of exposure to all blood and bodily fluids. There is the potential that stomach contents or nasogastric aspirate could contain blood. The nurse in this case would also wear gloves to protect their skin from the chemical nature of the nasogastric aspirate, as it can be quite acidic. Another reason for wearing gloves in this example was even though the nurses were doing a routine task of aspirating the contents of the stomach to see if the stomach is functioning, in reality these contents were also considered as emesis or vomit. Many a nurse during observations would squirm and wince as they filled the contents of cups and receptacles with these contents, and they would squirm even more when they were required to return part of the aspirate back into the stomach, as was the case above with Gough. This can be explained as distasteful as the nasogastric aspirate has come out of the body. Liquid that leaves the stomach, 'vomit', once out of the body generally does not go back into the stomach (this is also an example of abjection which will be explored more in Chapter Seven). It represents the symbolic transformation of things that are done as everyday activities (Hamilton 2013, p. 277). The second point to note about matter out of place is that in this case the nasogastric aspirate was a large amount of the fluid, which was to be disposed of down the sink.

In this example the nasogastric fluid was not considered to be infectious and appeared not to be out of place to dispose of this fluid in this way.

Whereas when disposing of fluid that has been collected in a bag, even though the fluid is not considered to be infectious, it would be disposed of in the infectious waste bin. Take the following observation:

> *Karen takes her gloves off and immediately replaces them with another pair and begins setting up a nasogastric feed (connecting giving set to feed holder and connecting it to the feeding pump). Disconnecting the drainage bag that had freely drained the contents of Nicole's stomach from the nasogastric tube, she connects the nasogastric giving set to the nasogastric tub. Discards the drainage bag in the yellow (infectious waste bin) and then removes her gloves.*

In this example the nasogastric fluid is disposed of in the infectious waste bin. The infectious waste bin is for the disposal of clinical waste such as laboratory waste, blood, body tissue and containers that have blood within them (DHA 2004, s.15.2). However, in more recent times it has been recommended that receptacles containing bodily fluid, with the exception of urine or faeces, should be removed through means of clinical or infectious waste (Waste Management Association of Australia 2010).

As has been discussed already, infection control is about ensuring that matter is kept controlled and contained in the proper place. As shown previously, there are multiple parts of infection control that get incorporated into nursing practice. For instance, take the following account of Nicole and Karen:

> *Karen asks the nurse next door to "check a medication", the nurse next door comes over into the back and checks the mediation against the chart. Opening syringes and needles she connects the saline ampoule the syringe drawing up its contents and then connecting it to the ampoule of medication in her hand. She leaves the syringe on the trolley and collects some paracetamol from the drawer. Meanwhile the nasogastric feed alarms. Karen adjusts the feed chamber, she watches, resting her arms on the head of the bed, and again she adjusts the feed pump. Moving back to the trolley she opens the paracetamol and places it in the medication cup with some water. The social worker arrives, and Karen chats to the social worker as she puts on another pair of gloves.*
>
> *Fully dissolved she draws back the medication in the ampoule into the*

syringe and disconnects the needle and disposes of it in the sharps bin. Collecting an alcohol wipe from the ICU trolley she wipes does the hub of the giving set connected to the CVC. While she administers the medication she also talks to the nurse next door about checking the medications.

Removing her gloves, Karen checks the monitor. Moving back to the trolley she gets a syringe, placing gloves and goggles on she aspirates the nasogastric tube and administers the paracetamol and reconnects the nasogastric feed. Meanwhile she continues to chat to the other nursing staff about the state of the ward. She turns back on the nasogastric feed pump and the dialysis machine begins alarming. Moving back to the trolley she collects a glove and applies it to one hand, checking the heparin attached to the dialysis she comments "no good" and then moves to the sterile effluent bag resting on the dialysis machine, opening the bag she clamps off the effluent bag resting it on the floor she connects the new effluent bag. As she does she adjusts the dialysis screen, moving her goggles up to her head she calls out to the nurse in the bay "out for a bit", as she does she carries the effluent bag. She returns from the sluice room gloves off, she returns to Nicole's bay squirting antimicrobial hand rub into her hands.

In this example of a single nursing activity, that is administering medication; there are multiple activities that need to simultaneously occur to enable the medication to be administered but also interrupt this activity too. There are many examples of different forms of matter that need to be controlled, many sources of blood or bodily fluids that required standard precautions, and many different elements of personal protective attire. Actions included opening of sterile syringes for the administration of medication, the wearing and removal of gloves, the use of alcohol wipes to clean the hub of the CVC prior to injecting medication. Karen wore both gloves and goggles when performing a nasogastric aspirate and when removing the effluent bag (ultrafiltrate), she then disposed of the ultrafiltrate in the sluice and finally used an antimicrobial hand rub to provide hand hygiene, demonstrating that infection control is not in addition to practice rather embedded into practice.

Asking the infection control team

As with all participants I asked during observation and interview what they considered as their infection control practices. I deliberately asked a general rather than specific question, seeking their interpretations of standard or additional precautions and infection control. The reason for this is that in practice, health care

workers do not talk about how they implement standard precautions in their practice because, as I showed earlier, these practices are embedded in the everyday and are a set of practices used for all patients irrespective of their condition or infection status. In asking the broad question I acknowledge that I received a mixed response from participants. Some talked about everyday practices for those patients who are not labelled infectious, whereas for others the fact that infection control has been highlighted caused them to ponder the infectious patient.

As part of my data collection and understanding about infection control I followed the infection control team around, in particular the two CNCs of the infection control team. The two CNCs rarely went to the ICU and in terms of their roles as infection control professionals they assisted the entire hospital. As with all participants I asked them what their infection control practice were. One of the team's responses to this question was:

> *Well, to me, it's trying to minimise transmission of infection to anybody and that's not only staff. That's to visitors, to other patients and s, from our point of view, is us trying to educate staff to what is good infection control. Such as, I know we always harp on about handwashing but it's more than that. It's, you know, making sure your environment's clean, making sure your equipment's clean, making sure that you're clean. // that your hygiene is up to satisfactory standard. Knowing if your patient has got something, what are you doing with that? Like, if they have got MRSA or a MRO[63], what are they doing? Are they doing the correct practices and do they understand if they're breaking that practice? (Infection control team 1, final interview lines 51–60)*

She then went on to say:

> *But then, you know, what do I do as infection control? Well, everything I do in the acute setting is infection control. (Infection control team 1, line184–185)*

In the interview above, this infection control nurse discussed two main arms of infection control practices: standard and additional precautions. The infection control team referred to infection control principles as *minimising transmission of infection*

[63] MRO = multidrug resistant organism

to anybody and the need for *education on good infection control* practices, in other words standard precautions. The activities that the infection control team noted specifically were standard precautions including handwashing and maintenance of a clean environment, which included personal hygiene. Secondly, she discussed correct practices, and not breaking practices or disobeying the practice guidelines when it comes to the care of a patient who has a MRO or MRSA. In other words, their role was to ensure that staff adhered to the additional precautions guidelines in their practice to contain these multi-resistant organisms. However, these are not necessarily principles or practices that they demonstrated in their role, rather they are overarching aims and objectives that dictate when infection control practices required implementation.

The second infection control nurse, in contrast, answered the question regarding what her infection control practices were, from a personal approach.

> *I think I do it as a role. I mean, from the very start, from the very moment, when I get dressed in the morning, I've always tried to make sure that, for a start, I look neat and tidy when I come to work. So, you know, infection control is in my mind from the very start if you like, and I think we all do that. (Infection control team 2, final interview lines 173–176)*

This infection control nurse considered *everything* that she did was infection control. She also pointed out, like her colleague, that infection control practices were about personal hygiene, a state of mind *from the very start*. This answer from the infection control team was hard to comprehend. Moreover, both infection control leaders found it difficult to answer my simple question, ending up discussing additional precautions rather than standard, everyday precautions. However, the infection control team response demonstrated that infection control was both a state of mind and everywhere and in everything they did.

Though they were both nurses, the infection control team nurses were also leaders within the game called infection control. As nurse leaders they did not provide bedside care, however they had larger and more managerial roles than providing the everyday care of patients. This approach was reflected in the team's explanation of what they did as role models and in their roles.

> *We do environmental audits. We look at - from the point of view of cleaning of equipment, we go around and check all the people that are using OPA, which is orthophthaldehyde[64], or whatever it's called, that's the new glute that's out. Making sure that people are doing their practices correctly. We're implementing new practices all the time. Making sure, like, the hand rub's out, that we make sure that if we - you know, like, CN, if she was finding something wrong with a surgical site, we trying to feed back that information. We do in-services all the time. (Infection control team, final interview lines 19–205)*

While their roles as infection control nurses meant that they did not provide bedside care, what they did have was a facilitative approach that they believed enabled those at the bedside and within the entire health care environment to function to a minimum standard of infection control and prevention. They mentioned activities such as audits on the cleaning of equipment, the correct use of sterilisation agents such as OPA, making sure people practice correctly and they made mention of hand hygiene with the use of the alcohol-based 'hand rubs' or chlorhexidine-based hand gels. This description of their roles demonstrated the different game they play.

However, using the analogy of the field from Bourdieu, practices are the result of subjectivities that represent individual agents, while collectively how these individuals express themselves and engaged in practice is their habitus. There are rules around infection control practices, yet it is clear that these rules are not always understood or expressed individually (in attitude or disposition) when navigating the field called care. In contrast, the infection control team's field is the field of infection control. The ICU nurses, however, represented a field where the primary priority is

[64] OPA or ortho-phthaldehyde is a potent sterilising agent for heat sensitive equipment with less harmful side effects to that of glutalradehyde (glut).

nursing practices, and for that matter intensive care nursing first before other practices. Such a situation led the infection control team, on one occasion, to express some mystification as to why nurses find the application of infection control practices so difficult.

From the interviews with ICU nurse participants, I took a different message about the challenges. I did not see them demonstrating poor knowledge. In addition, my habitus was to not deliberately go to find what many might label bad practice. I came from the position of exploring nursing practice, not deliberately seeking to find bad practices. One of the interesting parts of the research was that it was often discussed from within the infection control team and from members of the ethics committee that I should 'report' if I didn't see a nurse washing their hands or demonstrating poor techniques. Firstly, as I was not an expert in infection control practices this was an unprofessional stance to take. Secondly, as the data have shown there are competing understandings of the nursing practice, of which infection control is a part. From my position, this study aimed to explore what was not understood about practice rather than taking the dominant perspective of non-compliance as the reason for variations on each practice.

As can be seen from the nursing participants' views and observation, they argued that they implemented and practiced infection control. They also asserted that everything they did was infection control (as with the infection control team) as well as recognising that everyone was a risk; whereas the view promoted was that nurses were not doing infection control to the appropriate levels. All described the elements of infection control practice, such as handwashing, appropriate gowning, and wearing of gloves. There is little evidence of the problematic attitude seen as central in the way the infection control team presented the nurses' practices. What is clear from observation and conversation is that there were many layers to practice, with

competing priorities, conflicts and challenges to the rules of the game. The basis and everyday nature of these practices meant that nurses had a great deal of trouble answering a question that focused only on infection control, because routine infection control (standard precautions) were now locked into routine, basic or fundamental practice. The ICU nurses' accounts in this chapter suggest that difficulties come when talking about their practice, for despite many elements of infection control being present in practice, many appeared apologetic or expressed that they felt they needed to include more infection control practices into their care.

Hierarchies of practice within everyday practices

In using everyday practices to understand infection control, this study makes visible how infection control became a guiding principle. Due to the nature of the intensive care patient, there were many ways and opportunities to have matter out of place and to be disorderly. From a healthy normal adult perspective people are used to dealing with these elements in privacy. In the context of intensive care these elements, such as hygiene, are no longer private but open to view, record and understand within a context of intensive care. It is my understanding from the infection control text that these infection control guidelines are a means of creating order. This is an attempt to create order from things that are, at times, seemingly disorderly because they deal with bodily matters and processes such as leaking wounds, blood, stomach contents and excreta such as urine and faeces. In understanding this order of things, nurses place their practices with such material into hierarchies within everyday practice, through categorising some matter as clean, while other matter was dirty. To explore how this hierarchy worked in practice I will explore when and where nurses used gloves as a barrier when they believed they would come into contact with matter that was dirty.

In many of the examples given, gloves were worn for many forms of nursing care when nurses were required to handle a person's body. It is the case that manoeuvring around standard precautions demonstrated the operation of symbolic power that each of the nurses had over matter considered as out of place or at risk of being out of place. Alan, in the previous chapter, had his hygiene needs met by the nurse wearing gloves, whereas there were other occasions when nurses did not wear gloves to perform hygiene. The policy recommended that gloves be worn when there was risk of exposure to blood or bodily fluids. Karen prepared a medication wearing gloves and this was symbolic of her understanding about her bodily boundaries and risk. The absence of gloves and other protective attire in the provision of care for the everyday patient is not a subversive manoeuvre by the participants, rather it is a demonstration of their ordering of matter that they understood to be dirty or disgusting, or not.

How bodily matter is perceived as disgusting is individualised. Miller states 'skin is dangerous because we load it with so much meaning' (1998, p. 53). For others in this study they found other bodily aspects disgusting. For instance, Anton found mouth secretion dirty and disgusting. Caroline, like Anton, applied gloves to offer ice to a patient's lips, whereas Katrina found not wearing a gown or people putting their feet up on the chairs, disgusting. Though in these accounts handwashing practices and the application of gowns or gloves symbolised attempts to create order, they also demonstrated a blurring of lines between clean and dirty.

Conclusion

In the tradition of Bourdieu, I continued to provide snapshots of everyday care by the nurses as they provided care to patients in the intensive care unit. These accounts of practice are to 'provide[s] fastidious anthropological details of specific snapshots of

radically different social formations' (Cregan 2006, p. 65). These social formations or accounts of care once again may not be new accounts in nursing, rather they provide minute details of the everyday social processes around the body and how nurses embody the intensive care space or habitus.

This chapter started by offering what nurses in this study consider to be infection control practices. Once again, the thesis is not about infection control practices but rather using this focus enabled nurses to talk about their work with bodies and how their bodies worked within this context. This chapter also looked at common, standard precautions that are used every day to control the spread of infection. In reality, what standard precautions can also suggest is that body work is deemed potentially infectious, and therefore all body work must have a level of caution and precaution. What this chapter demonstrates is that each nurse conducted this body work in varied ways. Their practices were held against the backdrop of infection control policy and procedures as the standard for performing this intimate body work. At no point do I wish to cast judgment on the policy and procedure regarding this body work. Nor do I wish to label the practices of nurses in the study as good, bad or otherwise (but as can be seen by some questions it is difficult to completely eliminate the researcher's own value judgments). My point is that body work is varied and therefore, like Bourdieu's playing field, demonstrates different ways of playing the same game.

CHAPTER SIX: MATTER OUT OF PLACE—BUT WHERE?

Introduction

In this section of the thesis I move away from what is considered the normal non-infectious patient, to consider the patient that is labelled infectious or in need of additional precautions. Additional precautions provide a range of precautions or practices that are used in addition to standard precautions, when these standard precautions are deemed insufficient. Additional precautions are used on patients who are *'known or suspected to be infected* or *colonised* with an infectious agent that may not be contained with standard precautions alone' (DHA 2004, section 2.1). These precautions focus on infections whereby the modes of transmission or spread include: airborne, droplet and contact transmission. These practices are also a range of additional practices to prevent the spread of these infectious agents, where possible staff are required to move the patient into a single room, commonly referred as the isolation room.

In this chapter I will explore, in part,[65] the theoretical underpinning of *these infectious agents* or multidrug-resistant organisms (MROs) and the practices that are used to protect staff and patients from the spread of these infectious agents. Using the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* on additional precautions I will then examine the care of a patient, Hamish, who has a multi-resistant organism and has been placed in the isolation room. The purpose of exploring this scientific underpinning of the precautions and MROs is to provide a context in which care is provided. In doing so,

[65] In this chapter I will introduce the scientific understanding of these significant infectious agents or multidrug-resistant organisms (MROs). These concepts will be revisited in Chapter Seven in the broader context of biomedical science and infectious control policy.

accounts of nursing practice are local and specific, concerned with dirt, science, technology, object and subject—the in-between (Latimer 2000, p. 3).

In particular, I will explore the isolation space and the use of personal protective attire and I will 'make sense' of these practices using Bourdieu and his analogy of game.

Multidrug-resistant organisms (MROs) and the use of additional precautions

Multidrug-resistant organisms, or MROs, describe infectious agents that have become resistant to a range of antibiotics used in the standard treatment of these infections. MROs can include common bacteria that are found in and on humans such as *Staphylococcus aureus,* which then can develop sensitivity and then resistance to an antibiotic such as methicillin or multiple antibiotics.[66] Resistance can occur with any infectious agent and typical[67] organisms also include resistant forms of enterococci, *Clostridium difficile* and gram-negative bacteria such as *Pseudomonas aeruginosa*. The rationale for managing these MROs in an isolation room and with additional precautions is due to the virulence of the organism, the resistance to antibiotics, the location of the infection and how susceptible a patient is to acquiring or experiencing harm because of the organism (Halcomb et al. 2002; Productivity Commission 2009, p. 124).

When a patient is known or suspected as being infected or colonised by one of these MROs then additional precautions are implemented. These are a range of precautions used in addition which can include: use of a single room or cohorts of patients in the

[66] *Staphylococcus aureus* resistant to a single antibiotic, methicillin is referred to as methicillin-resistant *Staphylococcus aureus* (MRSA). The same abbreviation can be used to refer to multiresistant *Staphylococcus aureus* (MRSA) referring to the fact that this organism is resistant to multiple antibiotics (Productivity Commission 2009, pp, 123–125)

[67] By typical organisms I am referring to frequently or commonly found micro-organisms that cause disease in hospital and also found to be resistant.

same area (hospital, ward or bay), wearing of additional personal protective equipment or attire (PPEs), additional environmental cleaning, single-use items or equipment dedicated to the patient or cohort, and closer surveillance of the population affected (DHA 2004; NHMRC 2010). The guidelines refer to the tailoring of precautions to minimise the spread of the infectious agent. Therefore, depending on the infectious agent, decisions are made as to how much or how little additional activities are used to control the spread of the infectious agents.[68] What the guidelines suggest is that these levels of precautions are interpreted and tailored to the understanding of two facts—the type of infectious agent, and how that infectious agent is transmitted. In other words, the addition of these precautions requires knowledge of infectious agents (bacteria, viruses, parasites) and it also requires knowledge of the way that these infectious agents or pathogens get moved about in the context of the hospital situation.

In Capital Hospital, the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) were developed into local policy, as an infection control guideline that provided policy on additional precautions. This document provided information about the precautions, described what precautions should be used and provided appropriate signage to the area where these precautions were necessarily (Appendix 7: Capital Hospital's contact precautions[69] signs). The use of additional precautions is about containing matter; matter that is out of place or matter that hospitals do not wish to become out of place (Douglas 2002). The focus of standard precautions is about blood, semen and vaginal fluid. It is about protecting ourselves from exposure to infections found

[68] In the most recent edition of the Australian infection control guidelines (NHMRC 2010, pp. 165–178) a table of recommendations according to type and duration of precautions specific to infection agent is provided.

[69] Contact precautions refers to the type of additional precautions. In general, contact precautions was referred to as additional precautions or more commonly the bay was referred to as the isolation room or the MRSA bay (even if the patient did not have MRSA, rather a MRO)

in blood and semen and vaginal fluid. These standard precautions will not only protect us, but when used according to policy will also prevent transmission of these infectious agents. The emphasis of standard precautions, as shown in Chapter Five, is on the unknowns about blood or bodily fluid.[70]

The emphasis on additional precautions is somewhat different as it deals with a range of infectious agents, some extremely contagious, such as chickenpox, or those less contagious but more significant in the setting of a hospital because of their difficulty to manage and treat, such as MRSA.

In terms of nursing care and management of a patient who requires additional precautions, the required care of the patient continues to take place alongside of these additional precautions. Many of these precautions include things that nurses have no control over, such as additional cleaning of the room or the types of products that are used to clean the equipment or the room. Nurses, however, are required to wear the appropriate personal protective equipment (PPEs) and manage the care of a patient, either in an isolation room or grouped in a bay with other patients who have a similar infectious agent (DHA 2004).

Intertwined with the management of the infection control of the patient is the medical-scientific concern regarding other issues such as causes or source of infection (particularly hospital-acquired infections), duration of invasive lines, appropriate antibiotic use and surveillance. The use of additional precautions such as the use of PPEs continues to be a controversial element in the management of the patient with an infectious agent. The *Australian guidelines for the prevention and control of infection in healthcare* describe a paucity of evidence or controlled experimental studies that demonstrate the effectiveness of the use of personal

[70] HIV, hepatitis B and C each have different incubation periods ranging from 14 to 180 days and antibody detection can take up to 6 months (average 3 months) (AIDS Australia 2011b; CDC 2012).

protective attire or the use of isolation to control infectious agents such as MRSA or Vancomycin-resistant enterococci (VRE)[71] (NHMRC 2010, p. 111).

Additional precautions, as a range of precautionary measures, are not simply a 'one size fit all' approach. The measures used are dependent on means of transmitting the infectious agent from one source to another. These precautions acknowledge that transmissions can be based on contact, droplet or airborne transmission[72] (Capital Hospital infection control guidelines 2000, 3B; NHMRC 2010, pp. 259–263).

The isolation space

During the observation period of data collection the majority of patients who required additional precautions were managed in the isolation rooms[73] of the ICU. There were three isolation rooms in the context of a total of 21–24 beds in the ICU. Throughout the period of data collection, the number of infectious patients averaged 1–2, however, there were occasions when all isolation rooms were used and bays in the general unit would also be required. In these cases, signage would be placed around the patient's bay informing the staff and visitors of the need for additional precautions. A trolley would also be set up outside of the bay with the necessary personal protective equipment such as gowns and gloves. On one occasion a whole four-bed bay was used for additional precautions due to the isolation rooms being in

[71] VRE = Vancomycin-resistant enterococci. Enterococcus is another example of a normal bacteria present in the bowel, which is neither harmful nor causes disease. Enterococcus causes disease when the bacterium invades other sites such as the urinary tract or wounds. VRE is a form of enterococci resistant to the antibiotic Vancomycin (Productivity Commission 2009, pp. 126–127)

[72] Contact transmission refers to person-to-person or object-to-person transmission of infectious agents. Droplet transmission refers to respiratory secretions such as sneezing or coughing and affects people in close proximity. Airborne transmission refers to infectious agents that like droplet transmission can be transferred through coughing and sneezing but can be moved about through air movement.

[73] The isolation rooms were single rooms and more private and quiet than the rooms in the four-bed bays. On occasions when there were no patients requiring isolation they would be used by patients who were long term as they were quieter and patients had more opportunity to rest and not be distracted, frightened or concerned by all the other activities in the four-bed bay. On occasion, they would also be used for patients whose treatment had been withdrawn and who were dying. This would enable family to have a private and extended period of grief without the activities of the general four-bed bay.

use and there was an additional three cases of patients in the ICU that required additional precautions.[74] Patients were isolated for infectious agents such as MRSA, multiresistant pseudomonas, *Clostridium difficile* and norovirus. During the period 2004–2011 the national statistics for MRSA in a sterile site (e.g. blood) decreased from 4.79 cases per 10,000 ICU bed days down to 1.44 cases per 10,000 bed days. However, the presence of new MRSA in a non-sterile site such as skin decreased from 26 cases to 5.3 cases per 10,000 bed days[75] for the same period of time (Australian Council on Healthcare Standards [ACHS] 2012b). Realistically, the number of infectious patients was not that high in the ICU. There were relatively low numbers of MRO patients, yet this situation dominated people's discussions when asked about infection control practices.

The isolation bay in which patient care took place appeared no different to any of the other bays in Capital Hospital ICU. The exception was that, rather than being arranged in a cluster of four beds, these bays were single rooms located along a back corridor that connected the east and west wings of the ICU. From the corridor, two glass doors led into the anteroom. The anteroom was a small room where staff were able to don personal protective attire such as gowns, gloves and masks. There was a sink, a range of supplies such as linen and the large ICU charts with the patient's notes. Both sides of the anteroom could be closed with the use of special sealing doors, which could enable the double doors from the corridor to be sealed and the

[74] In this example the hospital had an outbreak of norovirus and three patients in the ICU had contracted it. As norovirus is highly transmissible contact precautions were in place. In this case yellow and black hazard tape had been stuck across the four-bed bay to alert people that the entire area required contact precautions. The isolation room is also used for patient who required 'reverse barrier care/nursing' who are in an immunocompromised state, this illustrates that this is an ambiguous space. Theatres do not get used for anything else but theatre. Complaints often arise in the health care industry when spaces are used ambiguously, such as hallways and corridors for patients waiting for admission from the emergency department. It is as if space represents health, whereas health care is provided by the people not by the environment within which they provide this care.

[75] It is widely acknowledged that statistical comparisons are difficult due to the way that data are collected for these cases. Data collection is voluntary and therefore health care organisations can provide intermittent data. The most recent 2011 data show that the above rates have further fallen to 1.4 and 5.3 respectively per 10,000 bed days (ACHS 2012b).

double doors to the isolation room to also be sealed. The doors were half glass, which enabled continuous observation of the patient within the isolation bay and had the capability to have negative pressure ventilation (air conditioning). The double doors contained half windows with blinds that can open and close, but the blind itself is within the doubles panes of glass so that they are constantly sealed and do not provide a place for dust to collect. What was also distinct about the isolation bay was the gentle sucking sound of the negative pressure from the negative pressure ventilation, or the alarms that may sound if there has been a breach in that pressure. In addition, the entrance to the anteroom is adorned with information about what kind of additional precautions are required on entry to the bay.

The current infection control guidelines (NHMRC 2010, p. 259) describe the anteroom as a small room leading from a corridor to another room. Neither the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) current at the time of the study, nor *Capital Hospital infection control guidelines* (2000) defined or described the use of an anteroom in the management of an infectious patient in the isolation room. The Victorian Advisory Committee on Infection Control (VACIC) also describe the anteroom as a small room leading from a corridor, but goes on to say that the anteroom can be used to 'prevent the escape of contaminants from the isolation room into the corridor' (2007, p. 39). Within these VACIC guidelines there is explanation of the varying forms of isolation rooms, which include standard pressure isolation rooms, negative pressure rooms, positive pressure rooms and alternating[76] pressure rooms (2007, pp. 5–7). Of the four kinds of isolation rooms only the negative pressure isolation room and the alternating isolation rooms require an anteroom. The purpose of the anteroom, from a negative pressure perspective, is that it decreases the

[76] Alternating pressure isolation room can be either negative or positive pressure.

spread of diseases by airborne transmission such as measles, severe acute respiratory syndrome (SARS), tuberculosis (TB) and chickenpox.[77] As the pressure in the isolation room is less that the pressure in the anteroom or the outside corridor, this prevents airborne infectious agents 'escaping' outside the isolation bay.

The final difference in the isolation room was the use of infectious waste bins, rather than general waste bins. In each patient bay throughout the unit there were usually two to three waste bins available. Each bay usually had one to two general waste bins and an infectious waste bin, noted by the bright yellow plastic bin liners and the infectious hazard waste symbol on the front of the waste bag. These yellow infectious waste bins were made of thicker plastic and were disposed of in a different manner to the general waste. In the isolation room there were no general waste bins as all these were replaced by the infectious waste bins.

During patient observations there were no patients infected with an airborne infectious agent. Patients were placed into the isolation room either for infectious agents that could be spread by contact transmission, such as MRSA, or via droplet transmission such as respiratory syncytial virus (RSV) or mumps (*Capital Hospital infection control guidelines* 2000); collectively, the management of these patients were referred to as a 'patient in isolation' or a patient 'requiring additional precautions' or the 'MRSA bay'.[78] Nurses in the ICU rarely referred to precautions that focused on mode of transmission, such as contact precautions or droplet precautions.

[77] Towards the end of data collection during 2006, the use of negative pressure isolation began becoming more notable due to the concern for the emergence of a pandemic flu, post the 2002–3 SARS outbreak in China and Hong Kong.

[78] Nurses in the ICU rarely referred to precautions that focused on mode of transmission, such as contact precautions or droplet precautions. The exception being Beatrice on page 148 who used the term contact precautions

Patient care in an isolation room

To illustrate the care of a patient whose care required the use of additional precautions, the management of a patient with multidrug-resistant *Pseudomonas aeruginosa*.[79] *Pseudomonas aeruginosa* is a common bacterium found in plants, water and soil and also found in human axillae, ears and perineum (Falagas & Kopterides 2006, p. 11). Falagas and Kopterides (2006) suggest that *Pseudomonas aeruginosa* is highly adaptive in developing drug resistance, leaving limited treatment options. Studies have reported up to 66–100% of deaths are associated with gram-negative bacteria if they are resistant to multiple antibiotics, pseudomonas is one of them (Morel & Mossialos 2010, p. 1115; Productivity Commission 2009, p. 127). Both the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) and *Capital Hospital infection control guidelines* (2000) allude to the management of other multiresistant organisms (MROs) or multiresistant gram-negative *Bacillus*. In all accounts contact precautions are recommended. Contact precautions, according to the signage on the doors of the isolation room, included: single room; masks and face protection when risk of splashes or spray from blood or bodily fluid, secretions or excretions; long-sleeved gown *preferred* and gloves for all contact with patient, their equipment or furniture; and finally vigilant handwashing (*Capital Hospital infection control guidelines* 2000).

Hamish and his nursing care

The following field note describes the care provided to Hamish on his 74th consecutive day in ICU. Hamish was a gentleman in his 60s who was originally admitted to the unit with bronchiolitis obliterans with organising pneumonia

[79] Multiresistant *Pseudomonas aeruginosa* is also known as a multidrug-resistant gram negative *Bacillus* (MRGN), but through this thesis will be referred to by the more common description of multiresistant organism (MRO).

(BOOP). Though BOOP as a condition does not require isolation, over the course of his ICU stay Hamish was infected with multidrug-resistant *Pseudomonas aeruginosa.* Since his diagnosis of BOOP two and a half months earlier his condition had gradually improved; however, the damage done by the condition BOOP to his lungs, together with the MRO, meant he was unable to maintain normal breathing patterns. His therapy on a daily basis ranged from needing to be fully assisted in his breathing with a ventilator to the other extreme of only requiring high-flow oxygen delivered by a mask over his tracheostomy tube. During this period Hamish was cognitively aware of all his surroundings, and though he had a long period of being acutely ill he now had the difficult task of letting his body slowly heal, learning to breathe for himself.

Though weakened by his prolonged illness he was able to get out of bed with assistance and into a chair. Though he was willing to do this, this simple activity would exhaust him. He was considered an easy patient (by ICU standards) as he had very few invasive devices or interventions as he was essentially waiting for his body to repair itself. He was not technologically difficult to manage, there were very few devices, invasive lines and at times very little for a nurse to do for him as he simply needed to heal. Hamish was continuously monitored with electrocardiograph (ECG) and pulse oximetry (both non-invasive devices), he had an IDC and a nasogastric tube for continuous feeding and for the administration of medications. He had a tracheostomy tube and the level of intervention to assist his breathing depended on Hamish's physical condition and the management by the medical team. Hamish had multiresistant *Pseudomonas aeruginosa* (MRO) in his tracheal aspirate.

> *I arrived to find that Caroline has recently got Hamish out of bed. Hamish is resting in the big recliner chair that support limbs and can be adjusted and flattened to form a bed.*
>
> *Caroline is wearing a plastic apron, the bib over her head and the waist*

straps loosely tied. She bends over Hamish to reapply the calf compression devices to both of Hamish's legs. Removing her gloves she discards them into the rubbish bin and then moves over to the blue trolley to get a syringe.

Collecting fresh gloves she reapplies them and goes to the back to Hamish to reconnects his nasogastric feed, she reconnects the feed to his nasogastric tube and while there connects the pulse oximeter that is also hung over the IV pole. Moving now to the other side of Hamish she goes to the monitor and begins adjusting some of the parameters. Taking a blood pressure cuff she wraps it around Hamish's right arm and presses a button on the monitor to begin recording his blood pressure. Returning to the blue trolley she takes a thermometer and returning to Hamish she places it under his left armpit. Returning to the blue trolley she watches the monitor. Moments later she moves back to Hamish's right side and removes the blood pressure cuff, she carefully rolls up the cuff and places it on the shelf behind Hamish. She stands and watches, looking at the monitor and the lines and numbers representing Hamish's heartbeat, respiratory rate and pulse oximetry. She lets Hamish and his wife know what she can see on the monitor. Waiting a moment she then returns the trolley.

Only moments go by and she is back at his side and removes the thermometer.

> *'Can I get you anything else Hamish?' asks Caroline.*

The presence of the tracheostomy tube prevents Hamish from talking so Caroline watches Hamish's facial expressions and gestures. She moves the over way table from the other side of the room to Hamish's side.

Removing her gown and gloves she discards them in the anteroom bins and washes her hands. As she does this she looks at me and says:

> *'I suppose I should throw away my gown seeing that you're here'*

There are plastic gowns/aprons hanging on coat hooks in the anteroom. As she dries her hands she closes the doors from the anteroom to the rest of the unit. She sits at her flow sheet and begins recording her observations: heart rate, respiratory rate, pulse oximetry, blood pressure, urine output, endotracheal suction, bowel activity and pressure area care and position. What kind of assistance he is requiring with breathing—ventilator or high-flow oxygen therapy. As she sits there Caroline talks about the gowns:

> *'It's a waste, (motioning to the gowns and the act of throwing them all out). They are not meant to cost much, only about 10 cents. After a couple of hours….waste!!!…. what the hospital says is that it has to be thrown out every time.' as she gestures to the mountain of plastic gowns and aprons located in the rubbish bin.*

As she updates her charts she talks about caring for Hamish. She describes how this is her 3rd shift in a row looking after Hamish. She did two shifts then had some days off and today she is back looking after Hamish.

> *Caroline: 'it's boring—Hamish is self-sufficient'.*

As we chat we talk about caring for someone in the isolation room. She described how care can be confusing and compromising in the single room. Even though Hamish was self-sufficient—in the sense that he didn't need constant intervention with ICU technology, monitoring and therapy there

were still things that Caroline required assistance with when caring for Hamish. Activities like attending to the tracheostomy dressing or applying new strappits[80] or providing pressure area care.

'I can't do these things'.

As can be seen from the account of Caroline and Hamish there were a range of nursing practices, not all unique to intensive care or limited to nursing practices. Caroline described the management of Hamish as 'boring' because he was self-sufficient—there were limited things that Caroline could assist Hamish with as he was in a rehabilitation phase in his ICU management.

What is evident is the range of knowledge embedded in the practice to make sense of what is happening to Hamish and what is required to happen to enable infection control to take place. As with the routine care of Nicole by Karen, Caroline provided routine nursing care of the patient Hamish according to Capital Hospital's *Nursing practice standards* (Appendix 5). The overall aims of care can be summarised as: documentation of observations, safe administration of therapies, maintenance of comfort and hygiene, psychological support and adequate rest. The *Nursing practice standards* (2000) then follow with recommendations for specific tasks of care to be implemented at varying intervals through the day: hourly, second or fourth hourly, each shift or daily. This plan of care also provided the nurse with guidance regarding the timing of medical rounds, meal breaks and routine interventions such as the routine chest X-ray at 6 a.m.[81]

The nursing practice standards represented current orthodoxy in terms of ICU nursing care, they are the official way of thinking about how to manage the patient. This orthodox view of patient care demonstrates a focus on the physiological needs of the patient in a routine and organised way such as hourly vital signs and ventilator

[80] Strappits: a commercial tape to secure a tracheostomy tube to patient's throat.
[81] The routine Xray at 6 am is documented in the nursing practice standards in the following way CXR at 0600 hrs. (2000, p. 2)

observations. After this and less frequently are hygiene needs provided, such as urinary catheter care or nasal care. It is implied through the aims of the nursing practice standards that there is the need for comfort, psychological support and adequate rest. The physiological needs of the patient frame both the orthodox and doxic view of patient care. A patient like Hamish has long-term needs of not only physiological and psychological care but also an understanding of the patient in terms of their environment, resources and the workload necessary to meet these needs (Aitken & Elliott 2012; Cork 2011, pp. 244–247; Perrin 2013). Though the physiological needs of the patient dominate the plan, the aims of care also imply the other needs. Caroline's care that she provides for Hamish represents the taken for granted, or the accepted doxa of nursing care in the intensive care unit (Bourdieu 2003b, pp. 164–171).

In the previous field notes Caroline provided a range of care that included the routine monitoring and documentation of observations of Hamish's physiological status (heart rate, pulse oximetry, breathing pattern, urine output). Though routine, these vital signs provided the observations to understand Hamish's progress and stability. This progress and stability were also interpreted not only in the current findings but also Hamish's prolonged history in the ICU. The damage to his lungs from his condition, BOOP, meant he had difficulty being weaned from the ventilator. For instance, his current breathing pattern and respiratory observations needed to be understood not only in the context of the moment, but also his history and difficulty weaning as well.

This account of care also demonstrated the scientific knowledge and understanding of his condition, BOOP, its disease process and expected signs and symptoms. The knowledge embedded in this account of care also demonstrated Caroline's understanding of the patient's respiratory status, which also required a knowledge of

principles of oxygenation, ventilation, weaning processes and procedures. The recording of vital signs alluded to not only the heart rate or breathing rate, but also spoke more broadly about the patient's ability to cope with fatigue, respiratory depression, stress and anxiety and knowing the difference between each of them (Corley & Ringdal 2012; Crocker 2011; Rose & Hanlon 2012). This account also required understanding of the management of the tracheostomy tube, tracheal suction using a closed suction system via a tracheostomy tube and the securing of the tracheostomy tube, including the use of strappits.

This account of care also demonstrated the knowledge required to manage the invasive devices such as the indwelling urinary catheter (IDC) and nasogastric tube. With regards to the IDC, the Nursing Practice Standards recommend hourly observation of 'fluid output', 'maintain fluid balance' (Appendix 5 page 253) and daily IDC care (Appendix 5 page 254). This brief guideline is underpinned by knowledge of renal function, external genitalia, adequate hydration to achieve adequate fluid output, and risk factors for urinary tract infection (Davies & Bench 2011; Baldwin & Leslie 2012; Conway & Larson 2012). In addition to urinary care, the nasogastric tube provides Hamish with his nutritional and fluid requirements. The nursing practice standards recommend fourth hourly 'nasal care [and] nasogastric aspirate' (2001, p. 2). This implies an understanding of gastrointestinal anatomy and physiology, care of the nasogastric tube including correct placement, nasogastric tube and aspirate observations, understanding of the nasogastric or enteral feeding regimens, including administration of medication via a nasogastric tube, signs of delayed gastric emptying and bowel management (Whiteley et al. 2000, pp. 34–40, 108–110; Marino 2007; Marshall et al. 2012).

Routine care also required management of Hamish's mobility. It is a well-known phenomenon for ICU patients to experience muscle weakness and atrophy. Mobility

of the patient is not just about the patient's ability to move, rather this mobility also represents principles linked to deep vein thrombosis prophylaxis, chest physiotherapy, pressure area care and a personal state of wellbeing and independence. To move Hamish out of bed also required understanding of safe patient handling, manual handling and occupational health and safety principles. Finally, movement of the patient out of bed required understanding of Hamish's physical capability and strength, how much assistance was required to move him from bed to chair, and also how Caroline is to manage and manipulate the many attachments connecting Hamish to the monitors and equipment. An example of this was Caroline's ability to move Hamish, avoiding pain and trauma from the urinary catheter or tracheostomy. Caroline also needed to make a decision about which part of the equipment could be safely removed, if at all, such as disconnecting the nasogastric feeding set and the removal of the calf compressors (Grealy & Chaboyer 2012, p. 114) as was seen in the field notes.

Additionally, Caroline also needed to control and manage Hamish's physical environment, creating a setting that is safe to the patient and for staff, but one that is also cognisant of the needs of long-term patients who often experience an imbalance between sensory overload and deficit (Aitken & Elliot 2012). This requires provision of a safe environment for the patient by using as cot sides, as well as a safe environment for all others in the room (visitors, nursing allied health and medical professionals).

One of the final challenges for Caroline, and all nurses caring for a patient who has a tracheostomy tube present, was that of communication. The presence of the tracheostomy tube meant that Hamish was unable to speak. Caroline needed to use communication strategies that enabled Hamish to express himself within his limited abilities to do so. What Caroline did in this case was to lip-read and understand the

patient's non-verbal communication in the form of gestures and facial expressions Mitchell et al. 2013, pp. 160–161).

Though Caroline described Hamish as an easy patient and self-sufficient, due to his low acuity, there was a range of knowledge(s) embedded in his care that took place during this account. Though Caroline did not discuss these elements these were the expectations of care for ICU nurses. Most of this care was rendered as basic (Whiteley et al. 2000). All the care that took place would be considered routine and standard for the management of a long-term patient in the ICU. What was different in this situation was the use of additional precautions.

Using additional precautions

The challenge in managing Hamish was both his physical condition and the reality that he was being managed in the isolation room with additional precautions in place. What this account of Hamish and Caroline demonstrates is that managing a patient is about doing nursing practice. Yet, the inclusion of infection control influenced how nursing practice looked or was performed in a given situation. Earlier in this chapter, I identified the range of precautions necessary for contact precautions that included use of a single room; masks and face protection when risk of splashes or spray from blood or bodily fluid, secretions or excretions; long-sleeve gown *preferred* and gloves for all contact with patient, their equipment or furniture; and finally, vigilant handwashing (*Capital Hospital infection control guidelines* 2000).

In this account of care it can be seen that Hamish was managed in a single room, gloves were worn for contact with the equipment and furniture. Long-sleeved gowns were not used and in their place plastic aprons were worn, and hand hygiene was carried out. Caroline alluded to two phenomena that occur in the isolation room: difficulty getting assistance because of the need for additional precautions and the

ambiguity. Caroline described how she was unable to do things such as 'trache(ostomy) dressing, strappits or pressure area care' when she was in the isolation bay. In this account it was not that Caroline *required* assistance in the isolation bay with these activities, as it was common practice in the ICU, that these procedures were assisted by another nurse. Rather it was the fact that these procedures required *getting* assistance, which Caroline implied was difficult while in the isolation room. Usual practice within ICU was that the patient care nurses in the four-bed bay situation would offer each other assistance or they would seek assistance with activities such as applying strappits or pressure area care from a nurse whose role was to 'float' between patients, either in the role of the coordinator or team leader.[82] It was not unusual, even within the context of the normal non-isolated patient in the main unit, to go long periods of time without assistance because another nurse required that assistance.

During my observations of the isolated patient there was minimal interaction with other nurses. Nurses would open the anteroom doors and request if the nurse in the isolation bay required assistance. However, in the two-hour block of observation this happened infrequently. This phenomenon is not unique to Capital Hospital. Though this was not a question deliberately asked during interviews, such a situation was described by the participant Beatrice who stated:

> ***Beatrice:*** *It was when I was in London and I remember it because we'd had a 36-year-old. A 36 (year old) woman who was 36 weeks pregnant. She came with varicella and pneumonitis, ventilated, was sick, sick as a dog. So, she was isolated. No-one in that unit, bar three Australians, had had chickenpox. So, there was me, a friend of mine and the resident. So, for three days, that woman didn't hear anything but Australian voices because we were the only three people that went in that room and it—I found it quite strange because everybody in Australia had had chickenpox when they were a kid and so it wasn't a big issue. I can understand, you know, if they were pregnant or at high risk, immunosuppressed and stuff like that. No, no. So, I wondered, at the time, what they would do if we weren't working and I don't*

[82] The float or access role was a supernumerary role to assist bed side nurses meet their patients complex needs and assist in emergency situations (ACCCN 2003).

> *know whether they thought about it as well but I certainly (did)—because I was in that room for 12-hour shifts, three days a week. I thought to myself what would they have done if Leesa and this other girl and I weren't there? Would they just have, I guess, exposed a staff member to risk // I wasn't quite sure what they would've done.*
>
> ***Allison**: So, were there precautions in place at that time or was it something that was …?*
>
> ***Beatrice**: As in contact precautions?*
>
> ***Allison**: Yes.*
>
> ***Beatrice**: Yes. So, we—she was in a single room and we didn't have a closed suction system so it was open suction so you—we—you know, you wore masks and, you know, gowns and // Gloves and goggles and stuff like that but yes—and because I remember the room had a little window and so — People just used to look in but they never came in. Yes, show your medication at the door but that— (Beatrice, lines 589–625)*

The scope of this study did not enable enquiry as to whether it was the protective attire, the potential risk from the patient to the nurse, the time taken or simply that these bays were out of sight that contributed to lack of willingness or ability to assist in these situations. On this matter Bourdieu stated:

> Practice has a logic which is not that of the logician. This has to be acknowledged in order to avoid asking of it more logic than it can give, thereby condemning oneself either to wring incoherence's out of it or to thrust a forced coherence upon it. (2003a, p. 86)

There may not be necessarily any logic to this practice.

Confusion

Caroline also acknowledged that providing care for the patient in the isolation was confusing and ambiguous. During observation, Caroline recalled being told off by senior staff when the negative pressure doors were open. To create the negative pressure against infectious agents transmitted via airborne means the doors needed to be closed; this was to enable the pressure difference between the isolation room or negatively pressurised room and the external anteroom. Failure to have the doors closed potentially enabled the air pressures to be equal with the potential to spread the infectious agent via airborne means. Caroline described how this was confusing because there was an expectation that because Hamish was a self-sufficient patient,

he could therefore be left unattended so that nursing staff could assist in the isolation room next door, or provide tea relief for other staff members whose patients were much more critically ill and dependent.[83]

This point is demonstrated by the continuation of the field notes from the above account of Hamish's care.

> *Moments later Caroline was asked to check on the isolation room next door and then provide tea relief in the normal four-bed bays. Letting Hamish know she was out of the room she handed him the patient call bell. Caroline then opened the doors to Hamish's room and the doors to the corridor. She firstly went and provided assistance to the isolation room next door and then walked around the unit (as if being asked to check things for other nurses such as medications and fluids). After a period of time she went to relieve for tea breaks in the open four-bed [84]bays.*

This confusion is further demonstrated when I observed Hamish's care one week later. On this day Hamish was lethargic, suffering from terrible bouts of diarrhoea (antibiotic related) and did not wish to be directly observed, but he was happy that I chat with his nurse, Ruth, and observe his general care from the anteroom only. The confusions regarding the use of additional precautions and the anteroom came when I entered the room, as demonstrated in my field notes.

> *As I arrived in the anteroom I asked if I need to wear a plastic apron—Ruth replied "no because you are just in the anteroom".*
>
> *Today the doors from the patient bay to the anteroom are open but the doors from the anteroom to the general ICU are closed. As Ruth returns I ask about what she considered to be infection control. Ruth also uses humour and laughingly states "I wish I had disposable clothes".*
>
> *As we talk I can't help but notice the growing pile of plastic aprons hung on hooks in the anteroom.*

Another week later and I am again observing Hamish's care. This time Donna was the nurse providing Hamish's care. In my field notes I record the following:

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[83] On these occasions the alarms would be set loud, all doors opened wide and the staff member would listen out. She went on to say that providing this form of assistance was fine as long as you washed your hands and wore a gown—it was fine to help. The exception was the neutropenic patient as these patients would have strict 'reverse barrier' or positive pressure isolation rooms and additional precautions.

[84] Open four-bed bays were the bays used for non-infectious/normal patients.

Both sets of doors are closed (that is, the double doors from the unit to the anteroom and the double doors from the anteroom to the bay). As I enter the double doors into the anteroom Donna immediately asks me to put on a plastic apron. As I observe from the anteroom, I watch as Donna, wearing a plastic apron, moves into the bay and discusses with Hamish's wife about how he is sleeping and some phone calls that took place that morning. As she talks, Donna readjusts the ventilation tubing to be correctly positioned. Noting the time, Donna leans over and tips the hourly urine measure into the bag.[85] *Washing her hands, she closes the doors behind her and moves out to the anteroom and sits at the flow chart in her plastic apron and documents her findings while she continues to observe Hamish.*

After Donna finished documenting I have opportunity to talk with her about infection control practices.

***Allison**: "Donna what are your infection control practices?"*

***Donna**: "Handwashing and goggles" is her immediate reply "I often get surprised when I see people suctioning* [86] *or changing urine bags without wearing goggles".*

Moments later Donna responded.

***Donna**: "You don't learn about this (signalling to the anteroom space). Doctors just pop in from outside—they don't go into the bay … unless they have to".*

So I raised a scenario with Donna:

***Allison**: "But here I am, I've been in there (into the bay with the patient) and I'm here sitting in the anteroom. What is the anteroom for?"*

***Donna** replied, "I'm not sure".*

***Allison**: "Donna what about the negative pressure?"*

***Donna** replies: "It might be overkill".*

***Allison**: "Do we need it (the negative pressure)?"*

***Donna**: "Well he's got something. (turning the pages of his case notes) …he's got pseudomonas*[87]*, flicking through more pages… the notes say he has a VAP*[88] *a multiresistant pseudomonas after he was diagnosed with BOOP".*

***Allison**: "But there's guidelines isn't there?"*

***Donna**: "Yeah but it doesn't tell you about here (the anteroom) and the wearing of gowns or not".*

---

[85] Urine is measured hourly and then discarded into a drainage bag. This is a closed system so urine output can be measured without physically allowing urine to leave the system. But there are potential sites of urinary contamination as these urinary systems are designed for up to one week's use and get emptied as needed or at least daily(daily nursing orders) what are the potential risk factors of old urine and dry urine contamination?

[86] Endotracheal suctioning.

[87] Pseudomonas, referring to a multiresistant *Pseudomonas aeruginosa*.

[88] VAP = ventilation-acquired pneumonia.

My particular question of Donna regarding the use of the anteroom was to gauge her understanding of what this room meant in relation to the proper care of Hamish. These three notes exemplify the ambiguous space of the anteroom and the isolation room. The patient and his care was the same, and yet three nurses who were familiar with caring for Hamish all navigated the space known as the anteroom quite differently. Caroline firstly described being lectured for not having the doors closed (to prevent the spread of the infectious agent to the general ICU). In this example, Caroline removed her protective attire on leaving the isolation room and placed them in the bin of the anteroom. She then washed her hands in the anteroom and then closed the doors from the anteroom to the corridor. Ruth's example demonstrated that I did not need to wear a gown while in the anteroom and, like Caroline, had the doors left open from the anteroom to the patient's room but closed from the anteroom to the corridor. Then finally, Donna requested that I wear the protective apron on arrival to the anteroom. After patient care, Ruth performed hand hygiene prior to leaving the isolation room and kept the apron on while she completed her documentation in the anteroom. While performing documentation all doors were closed.

Such variation demonstrates how the anteroom is a blurred space, ambiguous and causing confusion. This confusion is further demonstrated with a revisiting of the policy at the beginning of the chapter. During the time of data collection *Capital Hospital infection control guidelines* (2000) and the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) make no mention to the function of the anteroom. There were no practice guidelines to assist nurses' decision-making about managing the patient in these spaces. The *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) describe using an

impervious gown or plastic gown to protect from blood and bodily fluid. It goes on to state that in relation to additional or contact precautions, there is a requirement for 'additional use of protective equipment' (DHA 2004, section 2.3). The local policy found in *Capital Hospital infection control guidelines* (2000) describes the use of contact precautions and made note of the precautions necessary to manage the patient in the infectious room or isolation space, but did not elaborate on the movement out of the infectious space into the anteroom.

Using these policies it could be argued that there is a right way of doing things, but the problem is that it is not clear what the activities should be. This ambiguity regarding contact precautions is further illustrated by one of the infection control team who, during interview, described a situation of contact precautions.

> *We try to be observant at all times and we pick up people as they're—you know, like, for example, if we see them wearing a yellow gown[89] out of an infectious room, well we say, "well, why are you doing that?" and they'll say, "it's clean". Well, that's not what you're supposed to do or we would go and we would look at the set-up that they've—if they've got patients that are in an MRO[90] room ... Making sure that people are doing their practices correctly. (Infection control team, final interview lines 194–202)*

This example from a member of the infection control team suggested that even if the yellow protective gown had not been worn in the infectious space, this was 'not what you're supposed to do'. In this example, even though the protective gown had not been worn it was considered inappropriate or wrong to wear it, even if it was clean.

This demonstrated that there was an expectation of how things should be done when managing a patient in the isolation bay. For instance, the following was an example from the infection control team's discussion of the management of contact precautions.

[89] Yellow gown is in reference to the impervious full-sleeved protective gown/aprons used in some of the isolation rooms.
[90] Reference to the MRO room is the isolation room or single room where a patient who has a MRO would be located.

> *Well, for example, when we went down there, we found all of their set-up for their multiresistant organisms were inside the room, right, so everything was dirty. So, the gloves // (they were) putting on, were dirty. Their gowns that they were putting on were dirty. So, we had to get them to throw everything out. We watched them while they did it all. (We)Had to bring everything out of the room. We had to reorganise their anteroom, which was, you know, a four-bed bay. Watch what they were doing all the time. (Infection control team, lines 900–905)*

In this example the entire space became labelled as dirty and ambiguous. The infection control nurse described throwing out protective attire because it had been in the isolation room. These comments suggest that all the protective attire that was in the isolation room had become contaminated and therefore could no longer be used there.

The final aspect of the confusion around this practice was the use of the doors to enable the negative pressure. Caroline described being told off for not having the doors closed, and the example of Hamish above demonstrated the outer doors being closed. This was true for Ruth, but Donna had both doors closed. On the issue of the double doors, during interview, Wanda stated:

> *It's whether or not the rooms are on negative or positive pressure. They still don't understand that negative pressure needs the doors closed, positive pressure needs the doors closed. They've got individual air conditioning. It doesn't work unless they're closed. (Wanda final interview, lines 216–219)*

For negative pressure in the isolation room to be effective, the doors to the isolation room were required to be closed, thereby creating a pressure difference between the isolation room and the anteroom preventing infectious agents leaving the isolation room. This was further assisted with the closure of the doors to the corridor, preventing the escape of pathogens.

In this account of care, Hamish had the multiresistant form of *Pseudomonas aeruginosa*. The guidelines recommended are contact precautions for this infectious agent. *Pseudomonas aeruginosa* a is transmitted via contact and there is the potential for droplets from coughing or sneezing to expel pseudomonas as it is found in

Hamish's tracheal aspirate: in his phlegm. However, what is demonstrated in this case is the use of an unnecessary layer of precautions, such as the closing doors to enable the negative pressure. The rules around the use of the doors were both unwritten and unwarranted.

When matter is out of place

The complexity of the isolation room and caring for a patient like Hamish is that the objects and activities (cultural artefacts) in this room appeared no different to the objects or activities in a typical intensive care unit room or bay. Many patients in the ICU need assistance with getting out of bed. All patients are monitored and these observations are recorded on the ICU charts. Many patients required ventilation and medication management. So, in the example of Hamish, the nursing care was normal; yet it is the addition of contact precautions in the form of the isolation room, the presence of the anteroom and the additional precautions of protective attire, such as a gown, which made the space in which care happens different. White (2009) suggests that these objects in a patient's space are how patients become known and how nurses made sense of the world. Such are the subtleties that made patients known. The sign at the entrance to the anteroom, the pile of disposable aprons at the entrance to the bay, or the growing pile of disposed aprons in the bin or hanging on a hook make this space known as an infectious space.[91] These signs and subtleties are not just for nursing staff—all staff are required to pay attention to the contact precautions sign at the entrance to the anteroom. Other domestic staff were often confused about when and what they could do—such as when to take a tray, empty the bins or wash the floor (this brought a complaint from Hamish's wife because she claimed she never saw the cleaning staff.)

[91] This is not too dissimilar to Ayliffe and colleagues' description of the isolation room (1990, p. 61).

The room with its ventilator, the ICU monitor and chart, and the one-to-one nursing care enabled recognition of an intensive care space. But the space became unclear with the added artefacts of gowns, signs and the heavy double doors, and the whistle of the negative pressure that made the space an infectious space or made the function of the isolation space unclear. Such variations in cultural artefacts made the space unknown.

In the case of Hamish, the use of contact precautions was to prevent the transmission or spread of a multiresistant *Pseudomonas aeruginosa* to other vulnerable patients in the hospital. Preventing the transmission of these infectious agents can also be considered as a means of preventing matter getting out of place (Douglas 2002). However, Douglas goes on to say:

> that our idea of dirt is dominated by the knowledge of pathogenic organisms. The bacterial transmission of disease was a great nineteenth century discovery. It produced the most radical revolution in the history of medicine. So much has it transformed our lives that it is difficult to think of dirt except in the context of pathogenicity. (Douglas 2002, p. 36)

Douglas suggests our conceptualisations of things as dirty, are now transformed by the knowledge that dirt is about infectious agents and pathogenicity. Such a conceptualisation renders the isolation room as dirty, yet while the space is defined as infectious this fails to adequately account for where the 'infectious' space ends. Where does its dirtiness stop?

The isolation space of the isolation room and the anteroom created a bounded space; bounded by an assumption that there is a recognisable end point where bacteria, virus or pathogen 'are' no longer a risk. These tiny infectious agents, invisible to the naked eye, no doubt influence treatment decisions and adjust the order of things such as the need to don protective attire, but it remains unclear how they influence practice.

Bourdieu's (2003a) analogy of the game enables the practice of managing patients in an isolation room to be better understood. As nurses, the game that is played is nursing practice; however, the field of practice is played out by individual nurses, differently. Using the analogy of soccer, the game is understood to have certain rules, such as how many players, the use of the ball, the role that each player has, the use of referees, the audience, and the condition of the actual field. The same can be said for nursing. In nursing, there are expectations about what nursing is, how it operates, the rules that apply, yet each nurse had differing social and cultural capital. These fields of nursing practice, even with the acknowledged expectations of how to behave in places such as the isolation room, have rigid rules of best practice guidelines and national authorities, yet enable a range of responses in every situation (Cregan 2006, p. 68; Travaglia & Braithwaite 2009). For this reason, the playing field varies and the players vary, which makes the game called nursing heterogeneous rather than homogeneous, as such rules and expectations would suggest.

The nurses' habitus is the internal embodiment of all the external structures that constitute the knowledge, rules, experience, history (external structures) that contribute to the external social structures called nursing and infection control practice. The habitus constrains but not predetermines. For instance, the absence of physical evidence as to the presence of microbes does not constrain all behaviour. Instead, nurses did not follow rules blindly but rather did what each nurse considered as reasonable given their embodiment of these external structures. So when habitus matches the field, the embodied practices looked like nurses following the rules, history and practices expected by infection control doxa on infection control. In such a situation, everyone appeared compliant and conserved the dominant field. However, when habitus did not match the rules then this is constituted as non-

compliance, which I would argue is not non-compliance but rather an opportunity to transform the field.

From the point of view of some participants there was an assumption that nursing was a profession with a homogeneous [playing] field. This assumption was based on a misunderstanding about how a common set of principles, values and practices operated to make all nurses similar. What the observational data of this study indicated was that nurses are not all the same, even though they may share common elements such as the Nursing and Midwifery Board of Australia's *Code of ethics for nurses in Australia* (2008). How this is enacted is different for each nurse.[92] However, using Bourdieu enabled another view through concepts such as the game and field showing there are many fields, or potentials, within nursing. These cultural fields within nursing enabled certain rules, attributes and decisions to be expressed and produced in nursing activities (Webb et al. 2002, p. 22). The convergent cultural fields of ICU nursing and/or infection control caused the game to look different. Moreover, Cregan argues that:

> An individual in a given habitus will display dispositions to behave in particular ways or to value particular expertise or to possess cultural attainments that are characteristic of that habitus without consciously following tested rules and without slavishly adhering to the unstated rules of behaviour of that habitus. (2006, p. 70)

That is, nurses' dispositions to practice in a particular way in the area of the infectious patient did not necessarily come from conscious following of accepted infection control rules or slavish adherence to them. Nurses in a given habitus such as the isolation room demonstrated dispositions to behave in a certain way. As a heterogenous group, these dispositions could look different, while others looked similar. The ability to practice within the isolation space varied with this disposition

[92] For instance, the Nursing and Midwifery Board of Australia's *Code of ethics for nurses in Australia* states that nurses' decision-making must be influenced by contemporary and well-established information. (2008, p. 4). The current infection control guidelines acknowledge that many areas of infection control practice have limited evidence and are based on credible history or workplace culture (NHMRC 2010, p. 10), which seems to go against the spirit of the code of ethics.

and also demonstrated variations in nurse's social and cultural capital. Given a nurse's social and cultural capital, their ability to navigate the game, and therefore have a feel for the game, was individualised and yet also, in part, represented the collective values of the profession. Therefore, the game and the feel for the game were different for some nurses.

The infection control team in the study, on the other hand, were a group of nurses and it could be assumed that they shared the same understanding as the ICU nurses. However, Bourdieu would suggest that their game was different. Their feel for the game of nursing in their subfield called infection control looked different to the game a nurse plays in the field of ICU. They had different social capital. The infection control team had different education. These nurses shared the empirical world of science and microbiology in the form of visits and access to the laboratories. The infection control team had access to technologies that allow visualisation of microbes and a physical understanding, which evidenced by their weekly visits to the microbiology labs. The infection control team also did not practice with a patient. The infection control team applied homogenous principles of infection control in a static sense, but not with a patient, rather in the spaces patients inhabited. Whereas working with the patient was unpredictable and the nurses undertaking patient care on the floor experienced infection control practices as dynamic and fluid.

In looking at the field of nursing and the subfields of ICU and infection control, the infectious patient and the space in which the infectious patient is cared for, demonstrated a location constituted by unknowns—where nurses' dispositions were practiced and demonstrated. This chapter demonstrates the taken for granted structures of the objective social or collective structures of an organisation such as nursing (field) and how individual subjects act within this field when demonstrating their embodied agency and their feel for the game.

Nurses use their feel for the game to interpret and apply their learning of infection control practices. These learnings do not occur necessarily in a textbook or through in-service education sessions. Rather they were played out, implied and developed individually and collectively. Previously, nursing practice has been looked at as doxa, or as a single canvas called nursing. However, nurses understand that the game is not always the same, even though it may be similar. Learning also takes place through those around them and their disposition towards infection control practices. The rhetoric that infection control is simple is also true. Infection control teams would argue that basic care needs to be brought to the forefront. This is fuelled by an assumption that infection control practices are best practised as simple, basic or inherent functions, like breathing.[93] However, this chapter indicates that infection control practices are not simple, rather they are complex forms of knowledge embedded into practice that compete and jockey with the nurses' other dispositions. Such a competition was demonstrated in all of the knowledge embedded in Hamish's care, yet he was considered boring and self-sufficient to these ICU nurses. Nevertheless, this infectious patient forced taken for granted infection control practices to move to the foreground, enabled by the wearing of a gown that represented matter out of place in the field of infection control practices. Donning a gown caused questioning of where and what was infectious.

However, nursing is not just a collective. Individual nurses have a feel for the game or a sense of what the game might be in any moment. Nurses grappled with the everyday nature of infection control practices and, in this case, infection control in the context of ICU. The variety of nurses' feel for the game of caring for Hamish was arguably an example that disturbs the idea that 'basic' practice is simple.

[93] Whiteley, Bodenham and Bellamy (2000, pp. 20–21) describe infection control practices as basic.

Conclusion

The theme of nurses' body work continues to parallel and contrast the body work for the 'normal patient' with that of the patient who is deemed infectious. It is worth noting from these accounts that the tasks or skills performed were no different to those performed for a 'normal patient', however the context in which it occurred varied significantly. It can also be noted that body work interacted with the idea of the social body. In comparing the body work of nurses in intensive care, the social body was not always or necessarily with the patient, in terms of conversations and communication between the nurse and patient. Rather, the social body of the patient as a social being had its meaning and managed to look normal, presentable, neat and tidy—demonstrating nurses' ability to appear socially and professionally responsible. The social body was apparent even in the work of nurses and their work with other nurses and health professionals. Intensive care work is one-on-one—at times providing limited and constrained communication with other nurses and health professionals. The social body of the patient emerges through the maintenance of a social and presentable body as it is embedded in the social body work of nurses. In stark contrast, the social body of the infectious patient was closed behind negative pressure doors, behind gowns, gloves and mask, waiting for assistance.

In this chapter I have demonstrated how in the policing of negative pressure doors, the social body of the nurse is lost. The literature on anterooms demonstrated how the protocols did not provide unequivocal guidance resulting in variations in the application of contact guidelines, closure or not of the anteroom doors and a space that was ambiguous creating fear, more isolation than was needed, and alienation of patient and nurse in the in-between of its contradictory space.

CHAPTER SEVEN: BOUNDED SPACE AND BLURRED BOUNDARIES

> It is thus not lack of cleanliness or health that causes abjection but what disturbs identity, system, order. What does not respect borders, positions, rules. The in-between, the ambiguous. (Kristeva 1982, p. 4)

Introduction

In this chapter, I explore the mystery of matter out of place. By this I mean that the very practices nurses use to protect themselves and prevent the spread of infection, through the use of standard and additional precautions, become objects of confusion. There is lack of clarity and certainty when caring for patients as to where infectious agents reside and for these reasons borders become object and boundaries are blurred. This chapter is about individuals' understanding and experience of boundary crossing. These boundaries are both symbolic and actual. These are boundaries and borders created through the presence or absence of infectious agents. To use the words of the participant Caroline:

> *You keep your bugs to yourself and someone else's bugs to themselves and if they all get mixed up and create a big problem. (Final interview, lines 30–32)*

This is the first boundary crossing in the spread of infectious agents, whether it be the actual or symbolic presence of these infectious agents[94] on you, or the cross-infections that occur between patients. But borders are also created through the use of protective attire, the isolation bay and the labelling of clean and dirty, infectious and non-infectious. These borders and boundaries are not just about the use of additional precautions for the patient with a serious multiresistant organism infection. Borders and boundaries are crossed constantly throughout a nurse's shift.

It is in these blurred boundaries of practice that pollution and taboo appear—this is where the problem lies. This boundary crossing elicits a response: a personal

[94] In this context I am referring to all infectious agents whether they are highly infectious or not, requiring standard or additional precautions.

response displayed as concern or confusion as these nurses make sense of this boundary work. In attempting to make sense of this work there is the realisation that these practices are neither subject nor object, practice is abject. By that I mean practice is governed by rules and guidelines, the very definite and object realities that influence nursing, health and organisations. These rules and guidelines that shape practice are also influenced by the confirmation of an infectious isolate, such as the presence of a multiresistant organism (MRO). However, these practices are subjective experiences at the individual level. The very precautions that nurses use to protect themselves do not necessarily provide them with security. Therefore, nursing also deals with the ugly, dirty and disgusting side of practice; things that turn our stomach, cause us to fear, have concern and doubt. This sense or emotion may be expressed for our patients, ourselves and those we love. So practice happens/exists in-between these two realities of the subject and the object. Kristeva would describe this in-between as abjection and described this emotion in the following way:

> Apprehensive, desire turns aside; sickened, it rejects. A certainty protects it from the shameful—a certainty of which it is proud holds on to it. But simultaneously, just the same that impetus, that spasm, that leap is drawn towards an elsewhere as tempting as it is condemned. (1982, p. 1)

Abjection, in the case of infection control and nursing practice, is the simultaneous experience of certainty and uncertainty; of providing a ‘service’ in the provision of care and yet at the same time experiencing confusion and ambiguity in feeling safe and unsafe.

In this chapter the accounts of nursing practice are made sense of using Kristeva’s psychoanalytical theory of abjection. The work that nurses do in and around infection control is simultaneously both certain and imagined. While nurses can see and know the very outwards signs of sickness caused by an infectious agent, many of the symptoms even assist in the early identification of illness. For example, the green

ooze from a wound or sputum, together with the stench of rotting flowers reminds nurses of *Pseudomonas aureginosa*. But similarly, these same symptoms can be far more aggressive in the nature of the illness in the tropical regions of Australia, which may lead to a differentiation in this knowledge, to consider this to be a form of *Pseudomonas burkholderia*. Certainty comes from the laboratory through the positive identification of an infectious agent. But with this confirmation comes uncertainty as to where they are on the body, in the air or surfaces and it is at that point where the imagination begins. In the face of the certainty associated with a positive microbiological sample (particularly when these infectious agents are of significance to hospitals),[95] the additional precautions begin and with that the lack of certainty of where the infectious agent is, has been or will go. Hence, microbiology in nursing practice is as much about imagination as it is about biomedicine.

In this chapter this understanding of infectious agents as both imagined and actual is firstly understood within the context of the biomedical and scientific world of microbiology. The extent of the hospital-acquired infection problem—or epidemic as some would call it within our tertiary health centres, is across Australia and the world. The problem for nurses (and everyone without a microscope) is that they cannot see the infectious agent, they cannot know if they have its presence on them, or where they might take it. The scientific world suggests that infectious agents are all around us. With that in mind, certain infections are rendered more significant than others and therefore the use of additional precautions is necessary to stop the spread of such agents.

The problem, however, is not the presence of an infectious agent. The problem, or the conflict, in this study arises because these infectious agents afflict patients who

[95] Significant in hospitals because they are a multiresistant organism, which hold particular threat to patients who are immune-compromised in the hospital situation.

are hospitalised and require assistance with every aspect of their lives. The infectious agents are microscopic and no-one can know where they could be in the practice setting. The use of additional precautions aims at limiting the spread and risk, yet these precautions do not necessarily provide guarantees as to where the infection agent may be. Therefore, where are the limits to the patient or where do the infectious agents' borders ends? It is this in-between the actual and the imagined that Kristeva locates abjection and by which I understand and explain nursing practice. The nurses demonstrated the in-between. Their accounts spoke of one's safety and security and yet go on to condemn, wish, or recant other ways of creating safety and security. Borders have become object and in trying to objectify the presence of infectious agents, this is creating a no-man's land of certainty and uncertainty, actual and imagined. In the next section, I describe the extent of cross-infection, outbreaks of disease in hospitals, and the role of the infection control team in limiting the transmission of infectious agents in the hospital setting.

The cesspool

The rates of MRSA and hospital-associated infections, in many opinions, are considered the litmus test for infection control and prevention in Australia. Not only is it a litmus test but, as ACHS (2012b, p. 42) suggests, it is also the measure of safety within a health care environment. During the period 2004–2011, ICU-associated new MRSA rates in a sterile site fell from 4.79 cases per 10,000 ICU bed days down to 1.44 cases per 10,000 bed days. Similarly, non-ICU-associated new MRSA rates went from 0.36 to 0.26 per 10,000 bed days in the same period (ACHS, 2012b, pp. 76–77, 80). In comparison, central line-associated bloodstream infections

accounted for 66.1 per 100 patient days in 2004 falling to 46.7 per 100 patient bed days.[96] The Australasian Clinical Indicators report states that:

> Central line-associated bloodstream infections (CLABSIs) are responsible for 20–40% of healthcare-associated bloodstream infections… a significant proportion of CLAB events are preventable through adoption of best clinical practice. The occurrence of healthcare-associated blood-stream infections (BSI) can be used as a measure of the safety of key clinical practice processes within a unit. (ACHS 2012b, p. 42)

What these statistics represent is the concern for the extent of MRSA and the potential rates of cross-infection while in a hospital and ICU. Further to this, Collignon and colleagues report:

> … 17–29% of patients with hospital-acquired BSIs[97] die while still in hospital. Patients who develop BSIs are also more likely to suffer complications during their hospital stay that result in a longer hospital stay and an increased cost of hospitalisation. (2008, p. 53)

Patients at most risk of acquiring an infection in hospital and developing resistance to antibiotics are patients in ICUs (Collignon et al. 2008, p. 53, Harrington et al. 2008, p. 201; Productivity Commission 2009, p. 124).

The biomedical scientific context: the infection control team

According to the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting*, the key to successful infection control requires the identification of hazards and risk, implementing basic infection control, having effective and appropriate work practices and training which are guided by infection control personnel (DHA 2004, section 1.2). In this study, infection control personnel were a large team of people that included microbiologists, occupational medicine, medical consultants, registrars and infection control nurses. At Capital Hospital there were four infection control nurses, of which two worked full-time. The two part-time nurses were responsible for surveillance projects such as

[96] One of the problems with monitoring infection control rates is the variety of reporting, the number of hospitals, the frequency of reporting and even the number of beds all which can influence the reporting of and publication of health care associated infection.
[97] BSI = blood stream infections.

monitoring surgical site infections. The two full-time nurses were Clinical Nurse Consultants (CNCs) and had provided support to the entire hospital. As the infection control nurses[98] they described their role in the following way:

> *We try and go out to the wards as often as possible. We try to be observant at all times and we pick up people as they're (doing it) … We do environmental audits. We look at—from the point of view of cleaning of equipment, we go around and check all the people that are using OPA, which is Ortho-Phthaldehyde, or whatever it's called, that's the new glut(araldehyde) that's out. Making sure that people are doing their practices correctly. We're implementing new practices all the time. Making sure, like, the hand rub's out, that we make sure that if we—you know, like, CN, if she was finding something wrong with a surgical site, we trying to feed back that information. We do in-services all the time making sure the environment's clean. You know, because, like we're involved with every aspect of the hospital, including, you know, making sure their food's cooked correctly, you know. We do audits on the ice machines and things like that. So, we're in every—I mean, there's not one part—department here that wouldn't know us. You know, like, we go and talk to facilities management and make sure that their equipment's clean that they take into the rooms. Minimise their risk of their—to themselves as well. Make sure their vaccinations are updated. So, you know, I think—and we even give the mailroom talks. I mean, we just about do every department. (Final interview with infection control team, lines 1193–194,199–205, 227–235)*

The infection control nurses, as can be seen from the final interview, completed a range of tasks within the hospital that influenced and *guided* how the entire hospital functioned. However, for the nurses in the ICU their role in controlling and preventing infection was in the use of standard and additional precautions to decrease the risk of transmitting infection from one person to another.

In addition to appropriate personnel, the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) recommends appropriate and effective work practices. These work practices are further governed by a range of levels of knowledge about infectious agents that are or can be present in a health care environment at any given time. Previously, I have discussed MRSA and BSIs but infectious agents include a range of multidrug-

[98] As there were two infection control nurses involved in the study and as a condition of ethics to maintain their anonymity they are referred to as 'the infection control team 1 or 2'.

resistant bacteria[99]), and in the last ten years greater concern is for viruses such as SARS, H1N1 with the emergence of MERS-CoV. Authors Chan and Wong state that:

> As nurses are among the first points of contact in a primary health-care setting for any person requiring medical attention, nurses need to be aware when screening the patient where any infection control measures should be initiated. (2007, p. 1962).

Conducting a meta search using five databases[100] a search of the terms 'infection control and ICU' yielded 53,568 articles. Using the search engine ProQuest the terms 'infection control nurses' yielded 112,816 articles that were specific to nurses, nurses in the infection control team, compliance, type of infections, policy and practice. This literature is dominated by best practice, surveillance, sources of infection and appropriate treatment of infectious agents. Another way of describing this, and how the tabloid media reports on such events, suggests nurses as the vector of poor infection rates and for cross infecting others. Together with this literature there are frequent media releases that describe hospital-acquired infections as a 'plague'. In attempting to control infections and practice, the scientific literature proposes a notion that nurses are non-compliant in their infection control practices. This literature outlines how they do not follow policy and best practice, nor follow the rules. This would suggest deliberate acts of disobedience, lack of understanding or total disregard for the best practice and standards. One tabloid quoted the Australian National University's Professor Collignon who argues:

> that a common sense approach to hand hygiene is essential to cutting infection rates. "But if you're lucky, hand washing is done 50 per cent of the time, even if people are being observed," he says. "People need to accept that their hands are the instruments where these germs get transmitted, and we can do something about it". (Labi, n.d)

[99] Frequently reported multidrug-resistant bacteria include Vancomycin-resistant *Enterococcus* (VRE), Vancomycin intermittent *staphylococcus aureus* (VISA*) and Multiresistant gram negative bacillus* (MRGN)

[100] Metasearch included the following databases: ProQuest Central, Expanded Academic ASAP (Gale), Oxford University Press Journals, ScienceDirect and Wiley Online Library.

From accounts such as these there is a horror and disgust that people get sick as a result of hospitalisation. The contemporary view of the human body is as a healthy, enclosed, intact body, free of disease and infirmity or what Dubos refers to as the 'mirage of health' (Dubos 2001) and this idea is pervasive even in environments such as hospitals. This mirage of health causes many to be surprised that hospitals have infections within them and that people get sick when surrounded by sick people (Roderick 2010, p. 239).

Abject spaces

Though the literature does not directly blame nurses, nurses become caught in the blame game because in their profession they spend more time with patients. The horror of cross infecting another is what this literature suggests, although it does not openly state that nurses and other health care professionals are to blame for the cross-infection. The literature shows that handwashing is the single event that diminishes the transmission of infections from patient to patient and for cross-infection to be taking place implied that nurses (and others) were not washing their hands, and in doing so have neglected their duties, wilfully not attending to practices such as hand hygiene. The idea of nurses deliberately infecting their patients are horrific and unspeakable thoughts, likened to accounts of staff deliberately harming their patients.

McCabe's chapter 'Subjectivity and embodiment: Acknowledging abjection in nursing' suggests that 'Sometimes bodies and/or the actions of nurses threaten an individual's assumption about what both the patient and nursing practice should be' (2010, p. 213). It is assumed that this dominant perception of nurses cross infecting patients is the only way of understanding how a nurse goes about their nursing practice in relation to infection control. The current means of understanding infection control is to only acknowledge the scientific literature or the rules that govern

infection control practices. It denies the opportunity to understand and interpret nurses' contributions to practice as something other than science and rules. McCabe argues that this is a form of control, to contain that which is abject and abject embodiment. She goes on to state:

> Abjection, literally, the act of throwing away becomes by extension the act of distancing oneself from something that is perceived as a threat or source of contagion, as an act of defending one's subjectivity. (2010, p. 214)

The rules of infection control, together with the dominant infection control discourses, bear no accounts of infection control as a subjective experience. Abjection is the defilement, horror and is felt when boundaries have become blurred and borders become object (Kristeva 1982). This blurring of borders in a bodily sense is that which Cregan describes as 'a semiotic (linguistic), but also an embodied, phenomenon. It is the rejection of and revulsion of what the body is and is not the body' (Cregan 2006, p. 96) and Holmes et al. describe this sense as a 'collapse of symbolic order' (2006, p. 308).

It is incomprehensible that nurses deliberately chose to defile their patients by carrying an infectious agent to them. But abjection, its horror, rejection and confusion is about the border crossing or blurring of boundaries that occur every day in the intensive care unit, because these infectious agents are invisible. It is my contention that the isolation room makes visible the contested spaced between invisible infectious agents and the need to contain the known and visible world. Though infectious agents are invisible they are an ever-present part of life, yet are abject because they symbolise uncontrollable, disorderly bodily boundaries. The accounts that follow demonstrate precautionary practices as a means of containing and controlling, while simultaneously exploring these participants' experiences as a subjective and abject space. They demonstrate a range of subjective experiences of

these precautions as both enough and not enough, where boundaries are blurred and borders are object.

From object to subject to abject

In trying to make sense of the meaning of the isolation space, in this chapter I have firstly looked at the biomedical understanding of infection and also at the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004)—these guidelines have been endorsed by the Communicable Diseases Network Australia, the National Public Health Partnership and the Australian Health Ministers' Councils for the Australian Government Department of Health and Ageing. In understanding infection control, all participants were asked for their definition of infection control. As mentioned earlier in the chapter, the participant Caroline saw the problem was cross-infection; this idea fits within the dominant discourse of the infection control and the biomedical and scientific literature, where the spread of infectious agents is prevented by minimising the risk of cross-infection. As Caroline suggests, in this location your bacteria belongs to you and I have my own. However, herein lay the problem. This statement makes the assumption that infectious agents are visible and that it is easy to identify what of such agents could be categorised as yours or mine. It also makes the assumption that an individual can keep their infectious agents in the 'right place'.[101] Though Caroline identifies that the issue is cross-infection, she does not allude to the fact that some bacteria that infect patients become, is as a result of *Staphylococcus aureus*, resident on the patient's own skin. There are places scientifically and technically where there is an absence of infectious agents. It is possible that equipment such as forceps and dressing packs can be sterilised in an autoclave, yet in

[101] *Staphylococcus aureus* is a bacterium that lives in a symbiotic relationship with human on their skin and in the back of people's nose and do very little harm.

terms of human terms the absolute absence of infection is impossible to achieve and hence people are a source of contamination.

In Caroline's account it is black and white: that what is yours belongs to you and what is mine is mine. For Katrina though, this is not black and white. She accepted that infectious agents get spread through normal contact. She stated:

> *Um that it's about minimising the transmission of bugs, minimising the infection rates around the patient so. I would try and explain it that every patient, every person has their own organism etc. and when I am coming in and doing stuff to them it can transfer from me to them from them to me, from me to other surfaces so with the infection control practices we try and minimise the amount of organism that get transferred. So therefore when they are transferred they are putting people at risk and increasing infection rates so by minimising the amount of transfer we will minimise the amount of infections and cross-contamination I suppose. (Katrina final interview, lines 48–56)*

In this case the presence of infectious agents is seen as inevitable and those organisms *do* get transferred.

The activities of infection control could be thought of as simple hand hygiene and wearing the correct attire. However, these very activities are the actions of individuals. Activities, such as hand hygiene are enacted by someone. Somebody's hands are washed. Somebody's body is clothed in a protective yellow gown. In this sense, infectious control is experienced as subject first, that is as an embodied experience.

In the accounts of Caroline and Katrina, they answer the same question differently. It is acknowledged in the literature that handwashing is the single most effective activity to control the transmission of infectious agents in the hospital setting (Larson 1995; Grayson et al. 2008, p. 260). As a method of controlling infection Capital Hospital undertook a hand hygiene campaign (Appendix 8). Another way of understanding hand hygiene is to think of this as an embodied experience of infection

control. When asked about infection control, the participants suggested the following:

> *It first means and it was drilled into us at nursing school wash your hands, wash your hands, wash your hands, always (emphasis) washing your hands. (Caroline final interview, lines 35–36)*

This was a sentiment echoed by Katrina

> *Washing my hands, using gloves all of the time. My hands break down very easily from the latex and the stuff that we use so I use the blue*[102] *gloves all of the time. I wash my hands when I can but again the soap is disgusting so I try and use the micro shield hand™ rub and just being aware what is on my uniform, putting a gown on if I have to. (Katrina final interview, lines 58–62)*

Lesley, on the other hand, interpreted the question more personally:

> *Preventing myself being exposed to things as well as preventing infection being exposed to other patients or other areas and protection basically.*
>
> *I always wear gloves when I go near a patient at least I try to, I feel like I am always washing my hands…*
>
> *Lesley—Yep umm I quite often wear goggles if I think that I might get splattered um...what else do I do, I think that is about all. And depending on what kind of procedure I may or may not wear other protective gear. (Lesley final interview, lines 9–11, 13–19)*

Lesley's views of infection control were also shared by Sandy:

> *I guess, basically, I treat everyone as if they have some sort of infection as such. So, I'm protecting the patient and I'm protecting myself at the same time using all the precautions and obviously, you know, gloves with bodily fluids, goggles with, you know, any blood handling if there's going to be any fluids as such sloshing around and just making sure that the patient's kept safe and I'm kept safe. (Sandy final interview, lines 21–25)*

Whereas Wanda saw infection control like:

> *Well, I like to make sure that if I've touched anything, that we use the —use the alcohol hand rub. I like to make sure that everybody's got some at their bedside. I do that every time I'm on so that if I need to use it, it's there and I can be assured that it's there and that's not why they're not using it because it's not there but yes, and if I'm in the single room, I'm—just use a—because I'm team leader a lot of the*

[102] Blue gloves refers to nitrile gloves that are designed to be used by people who have allergies or who are sensitive to latex.

> *time, in most of the time, it's just—my infection control practice is just to make sure my hands are clean between each patient, basically. (Wanda final interview, lines 71–77)*

Through these similarities and differences it becomes clear that these are individual and subjective experiences and interpretations of how these nurses manage infection control. This subjectivity is also shared with the infection control team. Their individual response as to how infection control should be viewed in practice was as follows:

> *Are they doing the correct practices and do they understand if they're breaking that practice, why is it that they find it so difficult to understand and that's what our biggest hurdle is that. They just don't understand. (Infection control team 1, lines 58–60)*

In this example, the infection control team sees the practice as black and white: correct or incorrect, and they argue that people do not understand infection control practices. Later during the same interview, the infection control team expressed the following ideas about infection control stating:

> *Infection control surely should be second nature…Nature, yes, common sense. (Infection control team 2, final interview lines 321–324)*

To the infection control team the practices used by everyone should be *second nature or common sense*. However, with regards to common sense Bourdieu states:

> Practice has a logic which is not that of the logician. This has to be acknowledged in order to avoid asking of it more logic than it can give, thereby condemning oneself either to wring incoherence's out of it or to thrust a forced coherence upon it. (2003a, p. 86)

To understand these subjectivities is to understand that practice is individual and because of these individuations there is ambiguity.

Blurred lines

Abjection comes from such ambiguities in practice. The lack of certainty about how things are to be done and the extent of infection control cause this ambiguity. The

following example from my observations demonstrates a common practice in the ICU, cleaning a bay in readiness for the next patient to come to the ICU.

> *Meril is cleaning the isolation room after a patient was transferred to the ward this morning. The patient was in the isolation room for MRSA. The sign on the door required all staff to adhere to contact precautions. Meril is wearing the yellow gown and gloves. The cleaners have already been in the room and done "their cleaning".*
>
> *I asked Meril "Who cleans the isolation room".*
>
> ***Meril**: "the cleaner does the bed, the floors and the trolleys".*
>
> ***Allison**: "What about inside the trolley?"*
>
> ***Meril**: "I don't know if they (the cleaners) clean inside! We clean everything with phenyl."*
>
> ***Allison**: "What about the stuff inside the trolley?"*
>
> ***Meril**: "It either gets chucked or we wipe it over with phenol[103] if it has a plastic cover. Or we used to, when we had lots of MRSA, we would just move it to the other (MRSA) bays. I don't know? You might know if that's what you do?"*
>
> ***Allison**: "I've seen it done before".*
>
> ***Meril**: "I prefer to chuck it all out. But it's such a cost and waste. We try to keep stock to a minimum. I don't know if they (the cleaners) clean the walls. They clean the shelves"*
>
> *As we talk Meril wipes down the plastic chair (used for the visitors) starting from the top and working her way down, bending and twisting Meril reaches all aspects of the chair.*
>
> *She then moves over to the blue trolley, as she does the side of the gown flaps out like a set of wings. She wipes out the top drawer. Then moving to the drip stand she wipes over the entire surface of the drip stand and the intravenous pump, including the electrical cord. Following all the connections she then wipes along the oxygen outlets.*
>
> *Hearing a call, she walks into the anteroom and discussed with another nurse some fluid orders for another patient. Walking back into the isolation bay she places the excess equipment on the trolley: The MIMs[104], magazines, a box of tissues and the patient's notes. The bowl of phenyl still sits on the blue trolley. Taking off her gloves and gown she moves down the corridor. She returns to the room with a large plastic bag. Applying gloves and then commences filling up a plastic bag "For further cleaning". Taking the bag she puts it in the sluice room. On her return she puts on another yellow gown and gloves from the cupboard of the anteroom. From the cupboard she also collects sterilised emergency equipment and walking into the isolation room she places the equipment on the shelf near the oxygen outlets.*

[103] Phenol is an inexpensive antiseptic. Also known as carbolic acid and many nurses talked about carbolising the beds in reference to the act of cleaning the bed with phenol or carbolic acid.
[104] MIMS a medication reference guide.

> *As she walks the gown slides down over her shoulders as the straps are not tied and the sides flap out like wings. She then leaves the isolation room closing the double doors behind her. Adjusting the table in the anteroom she straightens it up, along with the box of tissues from the trolley of excess equipment and then tidies the office chair next to it.*
>
> *Taking off her gown she rolls it up and places it into the bin of the anteroom. Moving the trolley she pushes it out to the corridor and then closes the double doors of the anteroom to the corridor. Walking with the trolley, she moves the MIMS and patient notes to the nurses' station,[105] and then she moves the trolley to bay 15 where there is a patient with contact precautions in a four-bed bay. She leaves the magazine on the isolation trolley in front of the curtains of bay 15. This area was the normal four-bed bay, the exception was the trolley in front of the closed curtains with the piles of yellow gowns, the various sizes of gloves, the drip stand with yellow gowns hanging over it and two hand-written signs. The hand-written signs were the white progress note paper normally found in patient's notes. It had been turned landscape and written in red texta they said "CAUTION!! This patient is in isolation" the other sign stated "Please use yellow gowns and gloves past this trolley". (Field notes)*

As explained in the previous chapter the use of additional precautions and, in this case, contact precautions are necessary. This includes a long-sleeve gown and gloves for all contact with patient, their equipment or furniture. According to the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* the use of gloves is necessary 'For all manual contact with patient, associated devices and immediate environmental surfaces' (DHA 2004, Table 2.2). Deciphering the guidelines it suggests that these precautions are necessary when you touch the patient. However, the guidelines provide no description as to what these immediate environmental surfaces are or what the associated devices would be. It could suggest things that the patient has touched, such as their bed and the equipment connected to them. It is unclear from these guidelines what this exactly means and precisely when to wear gloves. The guidelines also state that gowns are required for contact precautions and are necessary for 'Use when HCWs' clothing is in substantial contact with the patient (includes items in contact with the patient and their immediate environment)' (DHA

[105] The 'nurses' station' is an incorrect yet commonly used term to describe the central hub where staff can locate phones, faxes, computers, resources such as notes, patients' notes, results or texts such as the MIMs. A variety of staff (nursing, medical, allied health, cleaners, ward clerks) often come to the nurses' station to gather information or pass on information.

2004, Table 2.2). Again the guidelines provide no detail as to what is considered to be substantial contact with the patient. This could be interpreted in any number of ways: it could mean the amount of HCWs' clothing touching the patient or the length of time touching the patient. It also offers no explanation as to what the immediate environment is that requires the use of gowns.

In the example of Meril, we see her move in and out of the isolation room to clean the room as the patient has been transferred to the ward.[106] The patient is no longer present. Yet the materials and equipment used to care for the patient are still present in the room and need to be cleaned, disposed of or moved to be correctly stored, in preparation for the next patient to come into the bed space. In this example we see Meril take her gloves and gown on and off several times. She cleans objects in the room such as the trolley, the drip stand and even the chair in the isolation room. Objects also get sorted: she describes how some get disposed of (those that cannot be washed with phenyl); some get moved to another isolation space such as the magazine; whereas other objects get moved for further sorting, such as the placement of the MIMs and notes in the nurses' station. The room also gets further sorted and tidied in readiness for the next patient, such as replacing items like the air viva. It is the nurse's role to have the bay ready for the next patient, yet the guidelines provide little detail about what the nurse's responsibility is when cleaning and preparing a room that has previously had an infectious patient in it.

Kristeva states:

> It is thus not lack of cleanliness or health that causes abjection but what disturbs identity, system, order, what does not respect borders, positions, and rules. The in-between, the ambiguous, the composite. (Kristeva 1982, p. 4)

[106] All patients' bays were cleaned by cleaners and nursing staff prior to a new patient coming into that same bed space.

In a place like intensive care, which is surrounded by lack of health, it is apparent from the accounts of the nurses in this study that it is not lack of health that causes the abjection. It is the disturbance of identity and order. The lack of order emerges from not knowing if someone is clean or dirty, pure or impure, or infectious or non-infectious. It is not the lack of health; intensive care is full of lack of health and fragility. In this thesis the accounts of Nicole, Alan, Vivian and Hamish demonstrate unwell, critically ill patients in the ICU. Yet in Chapter Five and Chapter Six a new order of doing things became apparent. The use of the personal protective attire symbolically categorised things as clean or dirty. Kristeva stated that borders become object. In this case, the borders that had become object are the borders that are created by the labelling of things as being infectious or non-infectious. Borders become visible through the use of the additional precautions such as the yellow gowns or the signage that identifies a patient as infectious. There is an order or symptom that needs to be respected to maintain areas that are considered infectious or not. Yet the rules found in the guidelines (DHA 2004) do not provide a clear system of what, when or how things are to be done on occasions such as when Meril's cleaning of a bay that no longer has a patient present, but which previously had contained a patient requiring contact precautions. Kristeva (1982) described such a situation as abject, the absence of system, order, or identity. Additional precautions are deemed necessary by the guidelines 'in a health care setting for patients known or suspected to be infected or colonised with infectious agents that may not be contained with standard precautions alone and that could transmit' (DHA 2004, section 2.3). These precautions are a means of containing infectious agents from infected and colonised patients. It is my contention that these precautions are used to contain these infectious agents, and to create boundaries. Such boundaries and

borders defining where there are infectious agents and where they are not. These borders exemplified the situation that Kristeva refers to.

What is seen in the account of Meril cleaning the infectious bay are accounts of nursing practice trying to contain the infectious agent by the wearing of protective attire and the cleaning of the space. The donning and doffing of protective attire demonstrates that some areas are considered infectious and other areas are considered not infectious. It is my contention that both sides of this symbolic border have the potential to do harm in the acquisition of an infectious agent; however, one side is symbolically infectious, the other is not. Meril, in this example, is required to cross the border between these two symbolic areas.

Matter out of place

When nurses talked about their practice, they also talked about a range of other practices that were or had been used to control the spread of infectious agents. In the following account Wanda, a senior RN who also had a responsibility to manage infectious control issues in the ward, described what they used to do in years gone by.

> *Yes and it was a nursing job to do that then (clean the equipment) and now it's someone who really may have doubtful practices, I don't know because we don't train them. Cleaners don't know what they're (doing and) why they're cleaning infectious rooms separately. I don't know if it was any more effective or not but we used to fog the infections, infectious rooms, take everything out, scrubbed the walls (and fog them). (Wanda final interview, lines 143–146)*

Wanda described a certainty about the cleanliness of equipment in years gone by as nurses were responsible for, and required to do, more cleaning than they currently do. Wanda also tries to explain a recent incident of frequent multiresistant pseudomonas in one of the bed spaces. In the following account, Wanda is trying to make sense of her understanding of infection control and what is going on in the ICU. Wanda states:

> *I still see practices that are poor // we had an instance of increased, what we thought (was) incidents of multiresistant pseudomonas in one particular bed space and tracked it down to the sink. Now, people in my day, did not put bodily fluids in the handwashing sink. Where now, they're disposing of nasogastric aspirate and everything down the handwashing sink. Now, how you can expect—not expect things to grow. (Wanda final interview, lines 159–164)*

Wanda goes on to ask:

> *Or where do you empty the urine bag? The dialysis bags were being—also emptied into the sink. Now, you know, theory says that those things are—should still be clean and sterile but it's still urine. It's still excrement. It shouldn't be going into a handwashing sink. (Wanda final interview, lines 203–209)*

In this account, Wanda is not suggesting that urine is being emptied into a handwashing sink, rather she is asking why the fluid coming from the dialysis machine is going down the sink and questioning if it should go down a sink. In this example Wanda labels the dialysis fluid[107] as excrement and therefore considers that it needs to be disposed of like excrement, in the sluice room. She also questioned if the reasons there had been an increase in the number of MROs could be attributed to the presence of these fluids that she considers as excrement in the handwashing sink. She ponders the same questions regarding nasogastric fluids. This fluid she also considers as excrement and therefore needing to be treated as excrement.

These interpretations also speak of a need for symbolic order (Holmes et al. 2006, p. 96). In this case of infection control and practices—matter or dirt is out of place. Matter or dirt might be on the walls so they used to fog the walls, both Wanda and Meril question the presence of matter on the walls. Wanda raises the question that if nurses are not responsible for cleaning equipment any more, as they did in the past, how can she know if the cleaners have done it? Douglas stated:

> If we can abstract pathogenicity and hygiene from our notion of dirt, we are left with the old definition of dirt as matter out of place. This is a very suggestive

[107] Dialysis fluid called ultrafiltrate is the water, toxins and electrolytes exchanged from the patient during the process of dialysis. Theoretically, because this exchange takes place through a filter it is considered clean.

> approach. It implies two conditions: a set of ordered relations and a contravention of that order. Dirt then, is never a unique, isolated event. Where there is dirt there is system. Dirt is the by-product of a systematic ordering and classification of matter, in so far as order involves rejecting inappropriate elements. This idea of dirt takes us straight into the field of symbolism and promises a link-up with more obvious symbolic systems of purity. (2002, p. 36)

In other words there are things that are clean and non-infectious and then there are things that contravene that system of order. These are things that are considered dirty or infectious. This also suggests that where there is dirt or infectious agents there are symbolic systems of purity and order. All of these activities describe matter that the participants consider to be out of place. Cregan stated 'abjected matter is a remnant of the uncontrollably chaotic chora, which threatens to "irrupt" into (disrupt) the Symbolic order' (2006, p. 96). That is, the order created by a symbolic binary system of clean (non-infectious) and dirty (infectious) has been disrupted by the things that nurses do to the patient and their environment. Inherent in attempts to create order was acknowledgment of all things represented in practice that contravene this order, whether it is about the body or not. From these accounts, it can be seen that the practices used to control infection in the form of standard and additional precautions represented abjection for the nurse. It is not necessarily the patients that are the sources of abjection; that is, the 'object' of the abject. Rather, the defence of abjection is summoned because of the lack of clear boundaries as to where infectious agents from the patient are, and therefore where infectious agents begin or end.

But the unknown is also about the unexpected. The following account is from Sandy and during the interview she raised the fact that some situations are completely uncontrollable or completely unexpected.

> *Well, obviously it's not pleasant and your immediate (response) depending on what it is, like, say you've been vomited on, your first—well, my first reaction is, okay is it on my face? Clothes can be taken off and changed but if you're not prepared, you're not wearing goggles and there's that immediate (thought)—is there anything in my eyes, is there anything gotten up there?*

> *We have a girl here that, she had goggles on and she had a patient up in a sling[108] who then had a huge episode of diarrhoea which basically hit the floor. Her eyes were protected but it actually splashed up to her mouth and she was absolutely mortified, you know, just absolutely—just the thought—the thought of it. // you've got the thing of well, you know, if there's anything like "am I at risk" (and then)–// the actual thought of yuk. (Sandy final interview, lines 131–140)*

The ability to contain matter out of place was not always possible in the clinical situation. The wearing of gloves and goggles during the procedure were symbolic of safety and containment. However, these forms of protection, both physically and emotionally, did not protect all. The symbolic borders and boundaries created by the wearing of protective attire, in this case, have again become indefinite and blurred. What previously represented a boundary and therefore safety has blurred, in-between what is clean and dirty, infectious and non-infectious, belonging to you or me. The nurses, however, are unable to move from chaos to coherence because movement away from the matter out of place contains remnants of space that is abject, uncertain unclear and unclean. Kristeva asks the question of how life can be without borders and then goes on to state

> It is thus not lack of cleanliness or health that causes abjection but what disturbs identity, system, order. What does not respect borders, positions, rules. The in-between, the ambiguous' (Kristeva 1982, p. 4)

The lack of system and order disturbing the identity of matter and its rightful place signals the abject in this situation. On the one hand, protective attire and handwashing are modest acts that people assume requires little training and that everyone can achieve these activities. On the other hand, protective attire is a symbol of containment—protective attire and handwashing[109] are the accepted system to protect staff from blood, bodily fluids and infectious agents. These are simple tasks with symbolic power. Goldman (1991) likens gloves and gowns to the symbolism of

[108] By sling she is referring to the patient lifting device, which is a strong, soft material shaped in a way to easily be manoeuvred in and around the patient to lift the patient off of the bed and either reposition in the bed or move the patient onto something else such as commode chair, arm chair, when a patient is unable to move for themselves.

[109] As mentioned throughout this thesis, personal protective attire and handwashing are standard precautions, which are also used with additional precautions.

the high priests, who are believed without question. However, in these examples the nurses go on to describe other encounters of nursing and nursing care that demonstrated that infection control is not simply about these tasks for a patient. While these examples demonstrated the actual things that nurses do to manage infection control principles, they also demonstrated their embodied knowledge of understanding infection control as a practice, not only as a policy.

What's clean and what's not

In the previous chapter discussing Hamish, it became clear that the anteroom was an area where boundary and border crossing occurs. It is evident from the accounts of the participants Caroline, Donna and Ruth that they used the space differently and hence it represented different spaces where infectious agents might be. The ambiguity that the space represented, through the use of gowns and gloves and the opening and closing of doors to ensure the negative pressure ventilation worked, represents this border crossing. According to the *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* the use of infection control practices, whether standard or additional precautions, are for the purpose of controlling infectious agents and creating a safe workplace for staff and patients (DHA 2004). These guidelines are attempting to create systems of controlling known, unknown and potential infectious agents that may put lives at risk. These infection control practices are system of control and attempt to create order, particularly when at times there is no visible evidence of the infectious agent.

The blurring of boundaries and borders, however, is not just evident with the patients who are deemed infectious and required additional precautions. The following accounts from participants demonstrate that abjection is found when nursing these different patients in the intensive care unit. These accounts articulate elements of practice that are confusing, ambiguous or demonstrate a lack of order as to where the

infectious agent's border ends and where the clean orderly line of the non-infectious world begins. Katrina described this abjection in the following way:

> *On the precautions chart it says whenever you're touching bodily fluids to wear gloves but if someone just touched a bodily fluid with the gloves on and they touch them on the arm and they've got a bug, is that then transferred in the fluid and the sheets and everything? Infection can ooze everywhere or get splashed and stuff everywhere, so you've got to wonder what's clean and what's not. The phone that you're using; the keyboards that you're using; the cordless phone given to the patient … There are a heap of things to think about. (Katrina final interview, lines 414–422)*

In this example Katrina questions where infectious agents' presence ends, and therefore she wonders where the infectious agent could be. She asks herself what is clean and what is not. Her way of dealing with this unknown clean and dirty was to do the following things.

> *(I wear) The white gowns when I'm in the ward area with the patient and then taking that off when I go to the tea room, so I don't transfer a bug. When I looked after a patient who had mycoplasmosis I think it was. Just putting that on and knowing I take it off, go to the tea room, so you're not transmitting anything into the tea room. When you're in the infectious rooms, wearing the gowns, the yellow gowns or the white and burgundy ones. Just continually throwing my uniform in the washing machine as soon as I get home with tea tree oil to try and kill the MRSA. There has been a study showing that tea tree actually helps get rid of MRSA and other bugs, so throw it in and make sure I wear a clean uniform every day. Wiping my shoes down after my shift and stuff like that to prevent cross-contamination of infection. (Katrina final interview, lines 82–93)*

In addition to the standard and additional precautions she described a regimen of donning and doffing gowns in all circumstances to prevent the 'cross-contamination' and, in particular, she talked about not taking infectious agents to the tea room. She also described daily laundering of her uniform in tea tree oil[110] and wiping her shoes down.

[110] In small studies, tea tree oil has been found to have an anti-infective or antiseptic effect, though studies by Messager et al. (2006) and Carson et al. (2005) imply the concentration needed for this effect could not be achieved during the laundering process.

Like Katrina, Anton also described his practice in ways that demonstrated this border work that takes place in ICU. Anton, when asked what his infection control practices are, answers:

> ***Anton****: Apart from washing hands, I tend to wear a gown too…*
>
> ***Allison****: Just the cloth gown or?*
>
> ***Anton****: The cloth gown, yes, or unless I'm in the single room then I use the yellow disposable gowns but it's the cloth gown, you know, if I'm dealing with a patient or if I'm floating a bit.*
>
> ***Allison****: So part of it is about …*
>
> ***Anton****: Protecting my clothing because I—you know, you wear these clothes for eight hours a day and you go in the tea room, I'd rather de-clothe the gown rather than de-clothe myself and sitting there on a chair and be all—you know, feel all dirty. I feel a lot cleaner if I take that off. (Anton final interview, lines 28–42)*

Anton describes wearing a cloth gown all the time, and then wearing the yellow disposable gown when he is in the isolation room (the single room). The *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting* (DHA 2004) instructs staff to wear personal protective attire such as a gown when at risk of exposure to blood and bodily fluids or in the context of the additional precautions. These DHA guidelines provide the following instruction for the use of gowns 'the use of protective clothing (gowns or plastic aprons), worn over uniforms, protects HCWs from exposure to blood or body substances' (DHA 2004, section 13.1). The emphasis in the policy is the exposure of the health care worker, like Anton, to blood and bodily substances. In protecting himself, Anton wore a gown at all times. Anton stated that if he removed the gown he felt much cleaner. For Anton the gown represented a border between clean and dirty. Wearing a gown represented the containment of dirt to the gown. Removing the gown signified clean. However, Anton's description of this work was also abject, lacking clear boundaries. Later in the interview, when Anton was discussing feeling safe or fearful of catching something, he went on to say:

> ***Anton****: No. I think there's enough literature out there, you know, obviously for us to know that gowning up and "what precautions", whether they be airborne or what have you, that if you wear the gear and the gear's specified to, you know, one use only or, you know, use this all day or—so, I wasn't fearful about catching anything. Like I said, I was all gowned and gloved up. It was …*
>
> ***Allison****: And do you feel that actually makes you safe? Like, you mentioned your wife earlier that you don't want to take things home to your wife …*
>
> ***Anton****: Yes.*
>
> ***Allison****: Do you actually feel safe? You know, that the precautions that you have?*
>
> ***Anton****: I do, yes….once I get home, the gear's off, the shoes are off, your gear is off, put straight into the laundry so, you know. No, I feel pretty safe. (Anton final interview, lines 322–340)*

Anton described how he has confidence in the precautions; however, he described wearing a gown, either cloth or the yellow (disposable impervious) gown on all occasions to feel safe. Anton also described how his 'gear', that is his uniform, goes straight to the laundry and that he did not wear his work shoes at home, and that his shoes with his uniform went straight to the laundry. Therefore, the precautions that made him and his uniform clean and safe in the workplace became ambiguous because when he was at home his clothes represented dirtiness as they were disposed of in his laundry room.

Douglas (2002) suggests we should cause ourselves to face dirt that is rejected from our normal means of organising things (p. 37). She goes on to say 'in a chaos of shifting impressions, each of us constructs a stable world in which objects have recognisable shapes, are located in depth, and have permanence' (p. 37). Using this ideology in the case of Anton, he appeared to face dirt and sort dirt through the use of his gowns and where he wore them. However, when he got home there was a shift in perceptions and to stabilise his understanding further, he sorted things that in the hospital were clean to be recognised as dirty by placing them in the laundry. Cregan states:

> dealing with this evidence of the body's boundaries is both necessary and dangerous to the self-constituting subject. One must abject (expel) the waste and enter the clean and ordered symbolic state to function effectively as a social being. But at the same time the abject hovers in the margins of life never fully abolished: one bleeds, one is sick, one shits. (2006, p. 96)

In this example, Cregan is suggesting that to function well, people need to see boundaries as necessary and locations of dangerousness.

This symbolic order created by the wearing of gowns is also represented by the comments made during interview by the infection control team. As mentioned previously in Chapter 6, the protective gowns are only to be worn inside the isolation bay, irrespective of whether it has been worn or not. From the perspective of protecting ourselves from infectious agents it is necessary to prevent staff and patients becoming cross-infected. However, the danger lies in the realisation that this matter out of place, the infectious agent, can never be fully eliminated. As Katrina suggested, one wonders what is clean or where the dirt might be taken. There are no certainties or absolutes.

This lack of certainty, between mere ritual and symbolic power, is also demonstrated by official signs found in the intensive care unit outside the isolation rooms. On the wall outside of one of the isolation rooms was a sign demonstrating correct practice for handling gowns after they have been used (Appendix 1: Correct practice for hanging gowns). This is confusing for staff. The policy informs staff to wear protective attire to protect themselves from blood and bodily fluids and, in the case of additional precautions, when there is significant contact with the patient and their environment. While the removal of a gown is a simple task, according to this sign there is a correct way to do this and how to hang it once you have finished using it. This message conveyed by this sign would suggest that once a gown has been used it could be re-worn, as long as it was labelled inside and outside and hung correctly. This sign suggests the rationale for a gown being discarded was at the end or

beginning of the shift or when visibly soiled. This makes the gown an ambiguous border. According to this sign, as long as it is hung correctly it is acceptable to wear again. This also described the gowns, and for that matter, soiling in very concrete terms. The signs described how one side of a gown was soiled and the other not. It was also suggested that if the gown was hung correctly then it would not contaminate the wall or other gowns hung next to it. The gown has become a source of ambiguity; is it clean or not? This was found in practice by the examples of bins overflowing with discarded gowns. Whereas on other occasions there were gowns found hanging on the coat hook perceived to be clean. The infection control team reiterated the symbolic power of the gown by stating in regard to the gown, when worn outside of the bay when it was clean, 'Well, that's not what you're supposed to do'. Despite being clean the yellow gown was not allowed outside of the infectious space.

The discussion from the infection control team also proposed a sense of certainty, in that if a nurse is wearing a yellow gown they are labelled infectious. Stepping out of the bay, even if the gown is clean, is perceived as breaking the rules. The work of Kristeva enables this to be understood as abjection caused by uncertainty. Hence, crossing a border between clean and dirty in a yellow gown caused the certain to be rendered uncertain (Rudge & Holmes 2010, p. 1).

Conclusion

In this chapter, I have explored the mystery of matter out of place. By this I mean that the standard and additional precautions that are used to protect people from infectious agents become an object of confusion when applied to practice. There is lack of clarity when caring for a patient with regards to infection control practices, and for this reason borders have become object and boundaries have become blurred. The data found in this chapter indicate that these precautions mean many things in

the context of practice, more than just simple protective attire. In this chapter I examined how the rules of additional precautions are utilised by the nurses who work in this space.

Secondly, in this chapter I explored how nurses understood the ambiguity of matter being out of place and an abject space. In this chapter the certainty that protective attire, precautions and the ways of dealing with these abject things also demonstrates lack of clarity, system and order. The very objects that are used to protect nurses from infectious agents are the very objects that cause confusion. The gowns and gloves used to create a bounded space to protect nurses are the things that create the abject and horror.

In addition, the blurred boundaries between the non-infectious patient and the infected patient have been outlined in this chapter, as well as the systems used to minimise the transfer of infectious agents. These agents become systems of organising matter that is in the right place or not. However, the problem is that there is matter out of place everywhere.

This chapter moves from the subject space to the abject space. The abject spaces are about systems of containment, which to individuals do not make sense and sicken, confuse or destroy. Kristeva would suggest that borders have now become object. Prior to the diagnosis of an infectious agent the body was a bounded space, its skin created borders. Even with the extension of new borders in the form of IV lines and ventilator tubes the body was bounded and contained. With the diagnosis of their infection status, the patient's borders are objectified and those borders now include everything that is touched by the patient.

The physical surroundings and items in the isolation room now become part of the patient's embodied space. Everything in the room now is part of the bodily

boundaries of the patient. So where does the patient's boundaries end? Managing the infectious space is about managing the infectious agent that now belongs to the patient. These infectious agents lack clear boundaries and together with other things such as spit, urine and faeces, which contest systems of order, are disgusting because they have collapsed the order of what belongs to the patient and where it should rightfully be.

The work of Kristeva returns us to all things 'that disgusts, horrifies and render the certain, uncertain' (Rudge & Holmes 2010, p. 1). It affords a view of nursing care and how nurses understand things they do that disgust, horrify or render certain to uncertain. In trying to understand practice as abject, Kristeva offers:

> When narrated identity is unbearable, when the boundary between subject and object is shaken, and when even the limit between inside and outside become uncertain, the narrative is what is challenged first. If it continues nevertheless, its makeup changes, its linearity is shattered. (1982, p. 141)

It is through this process of exploring object, subject and abject that the makeup of nursing and therefore infection control as a practice can change through disruption of formerly linear accountings. That is, the collapse of the meaning of the order of infection control practices as a system of containing so-called infectious agents. It is my belief that nursing must embrace the subject, object and abject aspects of practice to enable infection control practices to fit within the boundaries of practice and not be separated out from practice.

CHAPTER EIGHT: CONCLUSION

This thesis has made visible how nurses incorporate infection control practices in an intensive care unit. The focus of this study has been on intensive care nurses providing care at the bedside.

While these intensive care nurses performed routine care, I came to understand that nursing practice is constructed around many knowledge(s). By focusing on infection control practices within nursing practice I explored how nurses navigate their work in ICU, providing nursing care and simultaneously performing infection control techniques. These infection control techniques, together with nursing practice, have been understood as object, subject and abject.

In this concluding chapter I bring the threads of object, subject and abject together. I begin this concluding chapter by summarising the findings of this study noted in this thesis. I discuss the problem of ethnography and limitations to the study. I then discuss how understanding infection control practice requires an understanding and an appreciation that this knowledge and practice must be constructed *within* nursing, and not in addition to nursing. The reason being, to use the opening heading of Chapter One, this is not about infection control. Finally, I conclude with a refocusing on infection control and the implications of this study to the field of nursing and infection control.

Nurses' everyday practices in an intensive care unit

If this was a theatrical play, the opening scene of this thesis began with a tragedy as found in the preface. In the preface was the heart-wrenching story of a woman who wished to die in her pyjamas. Having barely survived the amputation of her forearms and feet following a terrible medical condition, she unfortunately slowly faded away in an isolation room after acquiring a multiresistant organism during her

hospitalisation. The tragedy ended with her death and the realisation that this woman died after her one request was denied. She wanted to die in her own clothes. She wanted to put on *her* pyjamas and to be wrapped in something that reminded *her of home*. It was denied because she was in the isolation room. This woman was not some cataclysmic infection such as Ebola, she was infected by a multiresistant organism.

She left a lasting impression so that I needed to understand infection control practices within the context of everyday nursing. Given that the scientific literature tells us so much about infectious agents, was it possible that we were missing something in the context of practice that could help explain the dimensions of this practice?

In the introductory chapter I laid out the theoretical foundations of this exploration. Latimer's classic book *The conduct of care* conceptualises this foundation. To borrow Latimer's definition of nursing practice (2000, p. 3) it is my contention that nursing is:

> *Nursing practice* is precisely local and specific, not standardised *as it is specific to each patient*, and nursing can be many things: hesitant, incomplete, decisive, objective, subjective, concerned with dirt, the science and technology *of disease, illness, intensive care and infection control*, with the heroic and the mundane *acts of ICU*, with *critically ill* bodies and with emotion and with thinking *about me, the individual, the patient, the unit, the organisation and the profession*…it is a hybrid which occupies a peculiar space, the in-between. (my words added in italics)

Nursing is all of these things and for these reasons exploring nurses' infection control practices required an exploration of the concepts. Rather than attempting to construct a similar version of infection control as is already reported in the scientific literature and in the guidelines, I wanted to understand infection control in the local, specific, subject and object, heroic and mundane, clean and dirty things of nursing practice as they co-exist at the bedside. This required an exploration of these theoretical principles of object and risk, clean and dirty, fear and contamination and abjection.

The methodology and method used in this exploration is positioned in Chapter Two. Using ethnography enabled actual infection control practices of nurses to be explored in the context of everyday ICU bedside care. This chapter demonstrated that this study is underpinned by the theoretical assumptions about culture, the native's point of view, the natural setting and thick rich accounts of data that enrich the ethnographic process. The work of Bourdieu enables these assumptions of ethnographic research to be understood and worked out. Bourdieu's concept of habitus offers a solution[111] to the muddy field of subject, object and abject knowledge of nursing practice. The concept of habitus allows the complex mappings of how we know ourselves and are made known, and how our social, cultural and physical being is expressed in our feel for the game (Lewandowki 2000, p. 50; Cregan 2006, p. 69). Habitus enables our[112] own story of infection control and nursing practice, together with all its machinations, to shape the way we perceive, conceive, think and behave (Brown et al 2008, p. 1048). Habitus offers a solution to understanding this trinity of subject, object and abject because habitus is embodied practices inclusive of subjective attitudes (dispositions towards practice). Habitus overcomes the mind/body separation common to the way basic care or its refinement in infection control practices are often portrayed. Where infection control literature, research and practitioners look to lack of adherence and non-compliance, this research sought to look at it as a whole system of understanding and the place of nursing within that.

Chapter Three explored the shared world of Karen and Nicole. The provision of patient care involving advanced therapies and technologies such as invasive

[111] My reference to the term solution is not to say that habitus offers a solution to the problem of infection prevention and control. Rather, my reference is in regard to habitus offers a solution to the traditional binary understanding of infection control or the medicalised understanding of object and subject.

[112] By own story I mean the story of the participant but simultaneously acknowledge that I am part of this story.

monitoring, artificial life support,[113] multiple infusion pumps and dialysis are part of the everyday nature of ICU work. Despite all of this advanced technology and the acuity of the patient, nurses still make time to do the most basic or simple forms of care in the form of a back wash and repositioning a patient.

It is here that we have first glimpse of the hidden nature of infection control work. I argue that infection control is not added to practice, rather it is embedded into practice. Infection control practice, however, remained hidden from view because of all the other competing demands of the nurse. These practices are hidden as these infection control practices are thought of by the participants from the position of the dominant discourse of standard and additional precautions. The absence of discussion about infection control practices with the patient Nicole also enabled an understanding of how patients are understood as infectious or non-infectious. For instance, in Nicole's case, she was considered a non-infectious patient even though she had an infection and for these reasons she was positioned within an open plan bay of ICU, where infection control receded, hidden by her acuity. As such, body work is in the hind ground obscured by the vision of tubes and by the noise of alarms.

Chapter Four continued the exploration of infection control work as body work. In the previous chapter the act of performing a back wash and position change was set among the backdrop of an unstable critically ill patient. This act of rolling a patient onto their side to perform this care resulted in the patient's instability, despite the brevity and the necessity of this act. Chapter Four again looks at body work, in the provision of a full body sponge. In this case, the patient Alan is dependent on artificial life support but he is not medically unstable like the previous patient Nicole.

[113] An endotracheal breathing tube connected to the ventilator to assist patients to breathe.

In that chapter I explored the knowledge embedded in performing a full sponge. What knowledge(s) are necessary and in play that enable a full body sponge to occur. Next, these knowledge's were explored for meaning in the context of the intensive care patient. Such an exploration, demonstrated the taken for granted nature of the full body sponge and hygiene needs. These learning(s) are interpreted in the context of the infection control guidelines and, in particular, the use of standard precautions. In this chapter we see ICU work fade into the hind ground and have the essential care of the patient's hygiene needs move into the foreground. Bourdieu's (2003a) feel for the game within a contested space became evident. Those looking in on nursing would perceive that the patient was having a "wash", just as we might. But the act of performing a wash means other things in the context of ICU. The *wash* or hygiene means assessment of bodily systems, analysis and interpretation of these findings that inform the medico-scientific care of the patient was also taking place. The wash also represents the personhood of the patient that is being cared for and by whom. This intimate work is underrepresented in the medico-scientific world of charting care, where technical findings are paramount and body work in the care of the social, subjective naked and vulnerable patient is devalued. The symbolism represented in the meaning embedded in the act of a wash demonstrates this contested infection control and ICU space.

Chapter Five explored the care of the intensive care unit patient in the context that they are considered as non-infectious. It is here that I troubled the concept of standard precautions. Standard precautions are the infection control measures applied to all patients, irrespective of condition or infectious status. To do this I employed Douglas' notion of matter out of place. Matter out of place has many meanings. In this chapter I explored two understandings of this matter out of place. I firstly explored the care of the patient Vivian, who had matter out of place in his breathing

tube. In doing so I demonstrated how infection control is required to fit within the tensions of intensive care practices, which at times caused a reprioritising of care. Secondly, I explored the notion that matter out of place represented body work. The fear engendered by multiresistant organisms overflowed and saw skin and body work become matter out of place.

In exploring what matter out of place means in the context of ICU I disturbed the orthodox view of infection control practices and, in particular, standard precautions. Standard precautions began as universal precautions, a means of protecting staff from the risk of HIV and other blood-borne illness. These precautions have now evolved to represent a blurred space that incorporates blood and bodily fluids and, in many instances, merely contact with the patient for fear of transmission though contact or touch.

In Chapter Six I moved the focus from the non-infectious patient to the infectious patient and explored care that takes place in the isolation room. Within the isolation room I explored nursing practices in the context of patients who have a multiresistant organism and require the use of additional precautions. To a 'native' of intensive care the patient care that takes place within the isolation room is no different to the patient in the non-infectious or normal ICU. Infusion pumps, monitors, ventilators and tubes still need attention. Observations are recorded and nursing care takes place as always.

What was different about the isolation room was that borders became object and boundaries between what is thought of as clean and dirty blurred. It is here that there is the realisation that the policy of additional precautions designed to protect staff from harm was ambiguous and caused confusion. Douglas (2002) enabled not only an exploration of matter out of place, but also enabled our understanding of

additional precautions (or care in the isolation space) to be constructed using belief systems about pollution. These pollution ideas are evidenced in the coming and goings of nurses in the isolation room and, in particular, the anteroom. The isolation space demonstrated our pollution ideas and the confusion about what is actually polluting.

The final data chapter, Chapter Seven, pushes the notion of pollution further to understand additional precautions as abject. The borders and demarcating lines between clean and dirty, infectious and non-infectious are both symbolic and actual. The demarcation between clean and dirty, from a policy and scientific literature perspective, is as simple as removing protective attire, appropriate hygiene and leaving the isolation space. However, from a nursing perspective these borders and boundaries are less certain. Kristeva (1982) describes this lack of certainty as abject. The participants' concern is not whether there are in fact infectious agents, but rather where these infectious agents might be. Infectious agents do not respect borders; some infectious agents have learnt to live symbiotically with us. However, infectious agents, germs and pathogens have always been present with the potential to cause harm. It is, as Kristeva states, 'not lack of cleanliness or health that causes abjection but what disturbs identity, system, order' (1982, p. 4). Hospitals are symbols of moral order (Brown & Crawford 2009, pp. 508–511) and the notion of infectious agents threatens this moral order by potentially causing hospital-acquired infections and not being contained by its systems of order. This lack of certainty created the abject of unbounded spaces in infection control.

This is not about infection control

I began this thesis with these words 'this is not about infection control' and though there are many pages of this thesis devoted to the exploration of policy, procedure

and research on the topic of infection control, I once again state at the end this thesis that this study has not been about infection control. Using ethnographic methodology I explored the natural setting of intensive care nurses to examine their understanding of infection control in the context of normal everyday nursing.

This thesis has explored accounts of care using thick description of the practice. Having said this, I draw the reader's attention to two limitations of exploring participants in their actual setting. Firstly, in using the natural setting, ethnographic observation and interview are required to fit in and around the actual field. This meant that the ideal of formal interviews immediately following observation was difficult. Nurses could not simply leave the bedside to conduct an interview about the observation. So as researcher I had to contend with informal conversations during a 10-minute 'coffee break' or as I walked with them to an in-service education session.

Secondly, the natural setting also meant that there were real participants, patients—and in the case of intensive care, mostly unconscious patients. Due to the ethics committee requirements all patients, or their next of kin, required consenting prior to observation taking place, this was despite observation being of routine nursing care. This also constrained the process of data collection and the type of patients whose care the observations represented. Limited visiting hours, next of kin consent and, as a researcher, being required to leave during medical rounds all constrained the process of data collection. It also meant that observations of patients' care did not represent all facets of intensive care nursing, as patients had often been in the unit several days before observations commenced. Therefore, aspects important to understanding infection control and nursing practice could be missing due to the constraints put on the research process through the settings for obtaining consent. Having said this, participants had opportunity to discuss during the interviews any aspects of their infection control and nursing practice.

The aims of the study were to explore the natural setting of intensive care nursing and record accounts of routine intensive care nursing practice. In some instances these accounts of care explored the infectious patient and in others they represented routine patient care of the non-infectious patient. Despite the limitations in the research process, ethnographic methodology enabled rich accounts of nursing practice to be explored. It also enabled rich infection control practices to be understood *within* nursing practice and not *in addition* to nursing practice.

The problem with infection control

Infection control as a practice needs also to be understood as something that is done by everyone in one way or another, health personnel and lay people alike. Infection control is made up of practices considered to be both complex and simple. As a science based in microbiology, these practices have a long history with many quantitative studies describing the nature of pathogen and infectious agents, sensitivity and resistance, virulence and outcome of disease. The literature on effective infection control and prevention encompasses a range of studies and commentaries on surveillance, antimicrobial stewardship and 'good' or effective practices. With the exception of effective practice, the influence that nurses have on microbial surveillance and antibiotic stewardship is limited.

There are, however, many studies reporting on the effectiveness of practice-based techniques, such as, hand hygiene, the use of isolation techniques, personal protective attire; and equally as many reporting on the poor compliance of health professionals with these techniques. As a profession that has the greatest contact with patient and provides around the clock care, nurses are often in the firing line when approaching the topic of poor compliance with infection control and prevention. Alternatively, nurses are at the bedside when questions are asked 'how did this

patient get a health care associated infection?' In my own practice as a registered nurse I have witnessed this and received this form of questioning.

The reasons for health care associated infection occurring are often cause for great concern and conjecture. Calculable risks or likelihood of infection, together with portals of entry and susceptibility are accepted doxa within the realm of infection control and prevention This concern is especially true given that the single most effective means of infection control for the majority of infectious agents is hand hygiene, a technique that many consider as basic given that handwashing is not isolated to health professionals. The act of washing hands could be argued as simple, basic and an activity that everyone can do.

It is my belief that the problem with infection control and prevention is that there are two speeds[114] to the message and practice of infection control. The first speed or idea of infection control is firmly grounded in the idea that infection control and prevention is part of the normal everyday processes of life. The second speed in the infection control and prevention message is with regards to outbreaks and the apocalyptic fears engendered by these outbreaks (Chan & Wong 2007; Stuart 2007; Koteyko et al. 2008).

From an outbreak perspective, the use of additional measures such as additional hygiene, cough etiquette, and the wearing of protective attire are all used to contain and control the spread of infectious agents that may cause epidemics and pandemics, such as Middle Eastern Respiratory Syndrome corona virus (MERS-CoV). However, in the everyday setting, hospitals do not constantly deal with epidemics and pandemics. Infection control, in the context of nursing practice, is about providing routine care and preventing routine or everyday infectious agents being transferred.

[114]Two speeds—much like the economic debate that rages around the world where we have parts of the economy doing well and other parts in recession or depression.

All pathogens have the potential to be infectious, but not all are perceived as worrisome in the context of hospitals. Therefore, all pathogens are infectious and all could potentially cause concern in a hospital.

Understanding the war

The tabloids and the scientific literature would have us believe that there is a war going on: a war against infectious agents, pathogens and germs. Using a war analogy is commonly applied to representations of how our body's immune system is at war with pathogens. That being said, our bodies have always been at war with pathogens, some of these pathogens we have learnt to live with, others have dominated us. Somehow in all of the scientific knowing about infection control we have unlearnt how to know infection control as 'practice'. In Hamilton's (2013) study of veterinary practices she describes how there is magic required to transform the turd into a sample or specimen however to some it is just 'disgusting muck' (2013, p. 280). Hamilton's study could also be interpreted as demonstrating the object, subject and abject nature of veterinary work. The 'turd' is the personalised and subjective understanding of faeces; the specimen is the objective understanding of faeces and the disgusting muck the abject, the bit that has the potential to defile borders, to engender disgust.

Using Hamilton's example of turd, specimen or muck, the same could be interpreted with regards to infection control practices. By this I mean that the human body has always had and always will have bacteria and other infectious agents on or in it. In the hospital context, many patients will be infectious. These facts will not change

In providing everyday care, and in particular infection control within a context of everyday care, we need to change our way of seeing these practices. The challenges to nurses and other health care providers are to understand how we operate in this

complexity, how do we provide routine care while adhering to practice guidelines and providing best care? It is my contention that this is made possible by bringing together the subject, abject and object forms of knowing resident in infection control practices. We need to see that the turd, the specimen and the muck are simultaneously present. Such a means of understanding can accommodate the techno-scientific ways of knowing the patient and microbes, embracing the black and white empiricist perspective, while moving away from a culture of blame that currently exists in recognising the grey areas of contestation.

What is clear is that infection control is a contested space. There is a *need* to comply with guidelines, provide best and risk-averse care yet simultaneously provide appropriate and person-centred care. White and colleagues suggest:

> what becomes clear is how the hospital as institution can accommodate particular logics at particular times that are sometimes incommensurate with wider notions of "care" or "welfare" of patients. Such accommodation makes explicit the contestable characteristics of the hospital where alignments are made between multiple logics. (2012, p. 81)

The nurses in this study demonstrated their skill and their understanding of infection control policy and procedure. As I am not a trained infection control practitioner it was inappropriate to label the nursing practice in this study as good or bad. As I am also a nurse, I share the same 'game' as my participants, and it was not the purpose of this study to label or blame any practice. What I learnt was that infection control is present in nursing practice in-between nursing, and that the dominant logic that understands practice as non-compliant is out of step with this notion of care. The nurses in this study did not deliberately, out of irreverence or lack of conformity to the policy, fail to follow infection control guidelines to the letter. To use the words of the nursing participant, Katrina, she stated:

> *I think continually. I feel I'm being judged, like everything I do on a daily basis and by people around me. Having everyone around me when I've got the curtains open doing stuff I continually justify to myself as well and I*

> *think that reassures myself as to why I'm doing the things that I'm doing and not just going through the motions, because I don't like just going through the motions of doing something, I like to know why I'm doing it and continually justifying it to myself. (Katrina, lines 28–35)*

Such positioning demonstrated how lack of conformity is not deliberate. Katrina's words demonstrate a belief system that is not subversive, but rather is trying to make sense of the tensions within ICU nursing care that aims to provide quality nursing care and best practice.

Recommendations

Further study is needed to explore how nurses, in other contexts, incorporate infection control practices into everyday care. Greater understanding of practice is also needed. Though there is a plethora of research on individual aspects of care, in particular more work is needed to understand the value system of nurses with regards to routine, every day and embedded care. However, I am cognisant that many well-meaning individuals have attempted to explore everyday practices and infection control practices which have labelled practices as non –compliant or evoked criticism of the nursing profession. Exploring these everyday practices is necessary to explore the magic of practice, it enables nursing to understand the shape of the profession and the context of health care, that nursing overall is and needs to be part of the contesting of infection control practices.

Understanding the game

Each account of practice reported in this thesis highlighted nursing practice and how, within this practice, infection control fits in and around nursing. At times, infection control is hidden from view by the competing demands of a critically ill patient, whereas at other times it became lost in the perceived basic or essential forms of care that are termed body work. Still other times, infection control is advertised across the

unit in a swath of plastic gowns, masks and the obligatory STOP signs. This is especially important to note given that this is its dominant presentation.

Bourdieu's concepts of field, knowledge and capital enabled an exploration of everyday nursing practice in the intensive care unit. Nursing practice is noted to be constructed around subject, object and abject forms of knowledge. Some of this knowledge is accepted as *doxa,* to manage the risk of exposure to blood, bodily fluids and multiresistant organisms. Nurses demonstrated their cultural feel for the game as they navigated between the distinct cultural fields of intensive care and infection control. The outcomes of this navigation were dictated by the requirements of the patient's critical status. This study also showed the subjective in the field of nursing through application of the idea of habitus as embodied practice to how nurses worked to identify matter out of place within their daily work. And finally, infectious agents are invisible and infection control practices that aimed to control and contain left participants fearful, confused and in conflict with infection control nurses. Nurses demonstrated that in trying to control out of place matter they experienced infection control as simultaneously many things, locating nursing in-between the lived spaces of dirty/clean and infectious/non-infectious.

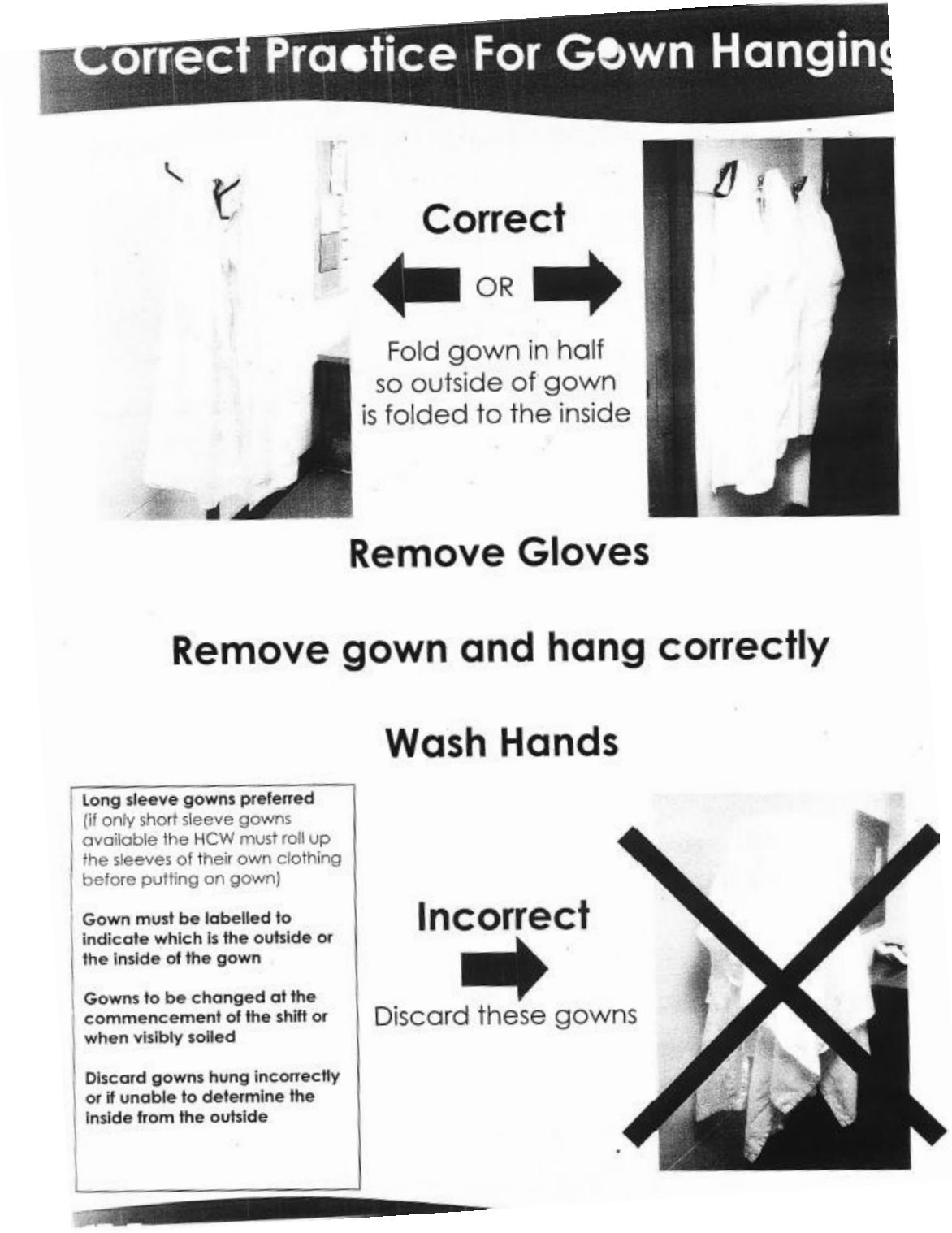
I end this thesis by asking a question 'Is it possible to practice infection control as a socially, medically and symbolically constructed space?' The answer is yes, because nurses are already doing it. The challenge is how do we change the current orthodox means of understanding infection control practices and policy and position them as socially informed practices that honour all three domains: object, subject and abject.

To further this work nurses (and for that matter all professions) must understand practice not in an empirical sense rather practice requires it be understood to mean many things and must be interpreted, as Bourdieu says, as 'sens pratique' or practice

sense. The game that we call nursing exists within other games: the infection control game and the intensive care game. Rather than attempting to fix the problem of infection control, do we need to explore the feel for the game that encapsulates subject, object and abject and play this out in each nursing context?

APPENDICES

Appendix 1: Correct practice for gown hanging



Appendix 2: Ethics application, informed consent and letters of approval

XXXXXXX Human Research Ethics Application

A1.Title of project

A1.1 Scientific Project Title

Exploring nurses infection control practices

A1.2 Simplified project title

a/a

A.2 Names and Qualifications of Investigators

Principal Investigator

Allison Roderick RN, B.AppSc (Nsg) Uni SA, GradDip Crit Care, MN Flinders University, PhD candidate (Flinders University)

Supervisory Panel of this PhD Research Project

Dr Trudy Rudge, A/Prof and A/Dean of Higher Degrees
School of Nursing and Midwifery
Flinders University,
Bedford Park SA 5042 (08) 8201 5353
trudy.rudge@flinders.edu.au
Please find attached a letter from Associate Professor Rudge (see Appendix)
Dr Charmaine Power, Snr Lecturer
School of Nursing and Midwifery
Flinders University
Bedford Park SA 5042 (08) 8201 3270
Charmaine.Power@flinders.edu.au

Senior Investigator at XXXXXXX
Professor Paul Arbon, Professor of Acute Care Nursing
Research Centre for Nursing Practice, XXXXXXXXXXXX
XXXXXXXXXXXX

A.3 Endorsement of Heads of Department

Endorsed by the following authorities (see Appendix)

A/Director of Nursing, Ms. XXXXXXXXXX

Acting Clinical Nurse Consultant, Mr. XXXXXXX

Director of Intensive Care Unit, Dr XXXXXXXXXXX

The Infection Control Team, Dr XXXXXXXXXXXXX

A.4 Multicentre Studies

The Principal investigator is a PhD student at Flinders University. This research project was approved by the **"**FLINDERS CLINICAL RESEARCH ETHICS COMMITTEE" in Adelaide as the project was going to be conducted at Flinders Medical Centre (see Appendix). As the Principal Investigator is now working at the University of XXXXXXXXXX(School of Health Sciences – Nursing) it is proposed that the study is conducted entirely at the XXXXXXXXXX.

A.5 Plain Language Description of the Project

The study aims to explore nurses' infection practices during routine care of patients in the Intensive Care Unit at the XXXXXX Hospital. Infection control is a broad term aimed at reducing patient's, employee's and the public's risk of infection. The study aims to observe nurses and the infection control team as they provide routine care of patients. Observation will be followed by interviews. The combination of observation, interview and document analysis aims to uncover issues related to nurses' infection control practice. Little is understood about what influences nurses' infection control practices and how the quality of these practices can be best addressed.

A.6 Ethical Implications of the Project

The study will be conducted in accordance with the National Health and Medical Research Council (NHMRC) guidelines. In particular special concerns are the areas of consent, confidentiality and sensitivity

Informed Consent

The principal investigator Allison Roderick is responsible for obtaining consent prior to commencing data collection. This will include patients, next of kin, the infection control team and nursing staff.

Observation and interview will be of the nurses in Intensive Care Unit (ICU) as they provide routine patient care in the ICU of the XXXXXX Hospital. Nursing staff will be approached by a senior member of nursing staff and asked if they would like to discuss the proposed research with the principal investigator. If they agree the principal investigator will discuss the project with them, provide them with an information sheet (pages 26-27) and time to consider their participation. Should they agree to participate they are required to complete a consent form (see pages 28-29). The infection control team will be invited to participate and consent to the project in the process mentioned above (consent form and information sheet pages 30-33).

As observation of nursing care includes observing the patient, informed consent with be required from the patient. The recruiting and consent of the patient will be approached in the same way as described for the informed consent of nurses as above. Alternatively if they are unable to consent then next of kin will be sought to complete consent. Again a senior member of nursing staff will approach the patient's next of kin to ask if they are willing to discuss the proposed project with the principal investigator. Should they agree, the principal investigator will discuss the proposed project, provide them with an information sheet and time to consider the patient's proposed involvement in the study. Should the next of kin agree, they are required to sign the consent form (22-25). When able, the patient will be informed of the research and given opportunity to discuss the study and given the option to consent or withdraw from the study.

After initially signing the consent form participants consent will be reaffirmed for each period of observation and interview by recalling with the participant the terms of observation and interview and the option to not participate in the research.

Confidentiality

All participants will be made aware that field notes will be recorded and that interviews will be audio-recorded and transcribed verbatim. All information will be handled according to NHMRC guidelines. Data will be de-identified. Mention of participants in the data will maintain anonymity with the use of pseudonyms.

All data will be stored in a locked cupboard at University of XXXXXXX. Files on the University and Home computers will be password protected. On publication of the thesis, data will be stored according to NHMRC guidelines in a locked and secure area at the School of Nursing and Midwifery at Flinders University.

Sensitivity

The study involves the observation and interview of nurses as they perform routine patient care in the Intensive Care Unit. Whilst it is not expected that the study pose any risk to participants, data collection may reveal sensitive issues. This may have the potential to cause emotional and psychological distress. Staff will be notified of the Employee Assistance Program provided by Davidson Trahaire (phone number 1300 360 364). This organisation provides free, confidential professional services.

In the event that during the course of observation and interview it comes to the researcher's attention that an event is unethical or has the potential to cause harm to the patient, the researcher is obliged to inform the appropriate personnel (Senior Nurse on Duty, CNC, DON, Medical Director). As the principal investigator is not an employee, it is inappropriate for Allison Roderick to take direct action during an incident rather the immediate reporting to the appropriate personnel.

A.7 Details of the Proposed Project

A.7.1 Background to Project

Infection control could simply be viewed as principles that govern good hygiene and good practice. These principles within health care institutions are reflected not just in direct medical care of a patient but in how institutions

manage waste disposal, the handling of food and resources to the most obvious of how a person is cared for, be it in a department, in the community or during an event such as an operation. Infection control principles affect all workers in the health care setting, but it is often nurses who are considered at the front line due to greater time spent with people.

Hospitals and health care institutions profess clear statements on where infection control is positioned. In 1996 the National Health and Medical Research Council (NHMRC) and the Australian National Council on AIDS (ANCA) endorsed guidelines for health care settings in the form of “Infection Control in the Health Care Setting: Guidelines for the prevention of Transmission of Infectious Diseases.” These guidelines, which are currently under review, gave recommendations in a wide range of areas from quality control programs, to the appropriate use of antibiotics and even the design of premises. Anecdotal evidence and a review of the literature however suggest that infection control is mainly about the implementation of standard and additional precautions, occupational health and safety and the monitoring of infections. The ideas and principles of infection control practices does not fully encompass what nurses do when they care for a patient nor does it reveal the challenge of contemporary nursing and health care.

Within the NHMRC and ANCA guidelines the report has this to say about infection control:

> Infection control is not simply a matter of implementing standards and guidelines. It involves improving awareness and changing attitudes and work practices at both the institutional and individual level” (NHMRC and ANCA 1998:2).

Infection control can be seen as a “What to do” list. Alternatively, much of the literature and research reports, “What is not done” for example non-adherence to infection control policy (Kim et al 2003 and Warren and Fraser 2001). It appears that the standards and guidelines are embraced without challenging the attitudes and practices of the work place at an institutional level or on an individual level as the recommendations suggest. These policy and procedure manuals aim for harm or risk minimisation. However, the question remains, how are these national principles to be applied in

numerous contexts when the principles at times do not reflect the changes and challenges in contemporary nursing practice or those of the health care institutions where infection control is a concern?

During 1999-2000 I conducted a study looking at the experience of nurses as they cared for patients who required additional precautions due to resistant bacterium (publications currently under review). Nurses in the study identified and were conflicted by the differences between practices and policy. What was said about additional precautions was not always put into practice. Alternatively understanding and beliefs about infection control principles reflected more than a single policy.

Due to the absence of nursing literature and research together with a culture of culpability about nurses spreading nosocomial infection, a research project to explore the experience of nurses and what influences nurses' infection control practice is required. This project will build on the present knowledge and understanding of infection control principles and nursing practice. The proposed study should result in identifying how nurses conceptualise their practice, infection control and how best to raise awareness and improve attitudes to infection control.

A7.2 Aims and Hypotheses

The study aims to explore the practices associated with infection control as experienced by nurses in the Intensive Care Unit. The emphasis will be to gain a better understanding of the experience of nurses as they perform their routine care and how nurses' incorporates infection control principles into routine care. As observations will guide the questions asked, the study is based on the following objectives

- To explore the current theoretical and practical explanations for the use of infection control principles as these influence and shape nursing practice,
- To observe the practices of nurses as they perform routine care of a patient,

- To observe each nurse's decision-making and prioritising of care when considering infection control principles,
- To interview nurses about these observations and decision-making processes to obtain a picture of their understanding of infection control practices,
- To identify and describe the contextual tensions associated with the practice of infection control in the institution,
- To observe how the infection control team influences nurses infection control practices,
- To interview the infection control team about these observations,
- To analyse policy and protocol and how these policies and protocols influence nurses' practices, and
- To identify strategies to overcome these contextual tensions that influence the practices of infection control.

A7.3 Methods

The research will be conducted using interpretive methodology, including participant observation, semi-structured interviews, and document analysis. Following ethics approval, nursing staff in ICU and the infection control team will be familiarised with the aims and objectives of the study. This will be achieved by conducting a number of planned open discussions on the proposed research. These open discussions will be advertised in ICU and enable all members of nursing staff to be informed, raise questions and concerns about the proposed research. In conjunction with discussions, senior nursing staff (Level 2 and 3) will also be kept informed through memos detailing research information, the research plan and the how observation will take place in ICU. The infection control team will also be familiarised with the proposed research through letters and individual discussion. Attendance by the principal investigator to infection control meetings and in-service programs will familiarise the researcher with the current aims, objectives, policy and terminology related to infection control.

The proposed study will be conducted in four stages. Stage 1 and 2 will be the observation and interview of nurses as they perform routine care of

patients in ICU. Stage 3 will be the observation and interview of the infection control team. Stage 2 and 3 will occur concurrently. Stage 4 will be the analysis of policy, protocol and educational material and using this data to conduct a final interview with the CNC, members of the infection control team and the nurses observed. Data collection will be completed within nine months.

Detailed breakdown of the four stages are as follows

Stage One Pilot study

Following ethics approval and consent of nursing staff and patient, the principal investigator will observe the practices of nurses when caring for a patient in ICU (for one month). Two periods of two hours of observation will be carried out per day, between the hours of 0700 and 2200, three times per week. The pilot study period will enable the principal investigator to explore the natural setting of the research to identify the best position for the principal investigator to observe from, so as not to interrupt routine nursing care, and to ascertain the best times to observe.

Field notes will be recorded during this time. This will include mapping of nursing movements in and around the patient's bay, counting tasks relevant to infection control such as hand washing and applying plastic aprons. It will include recording interactions and conversations of nursing staff and their patient relevant to the topic of infection control.

Short informal interviews will be conducted with nursing staff (N=15-30) within the 24 hours proceeding observation. Interviews will be 5-10 minutes in duration at The XXXXXXXX Hospital or in a location of the nurse's choice. During this time nurses will be interviewed on aspects of observations in relation to their own understanding of their practice, what it was like having someone observe their practice and the testing of interview questions. Interviews will be tape recorded and transcribed verbatim. All participants will have access to their observations and interviews and encouraged to discuss and feedback to the principal investigator.

Stage Two

This stage will entail focused observation and interview of routine nursing practice for up to six months. Again two periods of observation will occur each day for two hours each, three times per week. The observation will be focused on the issues associated with infection control as the nurses perform routine nursing care. During this time informal yet structured discussions will be undertaken with nurses on their development of knowledge on infection control practices, policy and protocol. Again field notes will be taken. This will be more descriptive in style so that field notes "become the eyes, ears, and perceptual senses of the reader" [Patton 1990:26].

From these focused observations of nursing practice, each participant will be invited to participate in semi-structured interviews for a period of 30-45 minutes (N=20-25) at a time and place of the participant's convenience. These interviews will be audio-recorded and transcribed verbatim. As the questions for the semi-structured interviews are dependent on the test questions of Stage 1 and the data emerging from the participants during Stage 2, the questions will cover the following areas.

- What influences your patient care in regards to infection control practices,
- Do these practices differ from patient to patient for example looking after someone who is known to have an infection,
- What are your concerns about the day and fulfilling your patient's needs,
- Where does infection control fit within those priorities and concerns?

Following interviews, participants will be given a copy of their interview transcripts and given opportunity to comment and discuss any of the topics or themes raised during the interview.

Stage Three

Stage 3 will be the observation and interview of the infection control team and their interactions with nurses in ICU over the same six-month period as Stage 2. The infection control team consist of nurses, microbiologist and medical consultants. During this period the principal investigator will observe the infection control team and their role to inform the practices of nurses. This

may occur in a number of scenarios. For example, during informal interactions with nursing staff when discussing individual patients or during infection control ward round. More formal observation will occur during in-service education and during meetings associated with infection control. It is necessary to include the infection control team, as nursing care does not happen in isolation. Rather nursing practice is influenced by many factors including the infection control team.

Following observation the infection control team will be invited to participate in informal interviews (duration 15-20 minutes and N=5), using semi-structured questions based on the observations at a time and place of the participants convenience. Questions will focus on:

- What is the infection control team's role,
- How are nurses' practices informed in the ways of infection control,
- How does the infection control team meet the educational needs of nursing staff,
- How does knowledge about policy and protocol transfer into nursing practice?

Interviews will be audio-recorded and transcribed verbatim. Copies of interview transcripts will again be available to individuals for discussion and comment.

During Stage 3, letters will be sent to nurses and the infection control team previously observed to invite them to participate in the interviews planned for Stage 4.

Stage Four

The final stage of the research will be the analysis of current policy, protocol and educational material on infection control practices available to nurses at the XXXXXX Hospital. Following analysis of these documents all participants from stage 1-3 will be invited to participate in a final interview (N=10-20). Interview question will include:

- What influences your care of your patient and how do infection control principles fit into those ideas,

- In every day practice do infection control principles and practice differ from patient to patient,
- What is your current understanding of infection control practices,
- Does the infection status of some patient's concern you,
- Are some principles and policies less than desirable for your every day practice and if so how,
- Do you think that these practices protect you and your patients from further infection,
- What are your concerns about the day and fulfilling your patient's needs,
- Has your perception of these practices changed through your nursing career?

As many of the questions relate to direct patient care, the questions will be adapted according to the role each individual has in providing care for a patient. Interviews will be up to 45 minutes in duration, tape-recorded and transcribed verbatim. Individuals will be given copies of their interview transcripts to enable discussion and clarification of themes.

A7.4 Number of Subjects with Statistical Validation

In employing qualitative methods and purposive sampling methods the concept of achieving statistical significance is inappropriate. Rather the quality of observation and interview is of greater importance. As observation will occur three times a week, a minimum of 3 nurses per week will be observed for a period of seven months. It is assumed that during the seven months of observation that there will be 336 hours of observation of nursing care. A variety of times and scenarios should therefore develop a collection of data that includes samples of nurses infection control behaviour.

A7.5 Methods by which subjects will be recruited

I am seeking approval to recruit nursing staff that are caring for a patient in the Intensive Care Unit and members of the infection control team at the xxxxxxx Hospital.

Staff selection criteria

Nursing staff will be invited to participate in the study if they are providing direct patient care of a patient in the ICU of the XXXXXXX Hospital. Participants will be approached through the senior nursing staff of that shift. During planned in-service education or meeting in relation to infection control the principal investigator will be invited by the infection control team to attend. Alternatively if the infection control team is making an unplanned visit to ICU and dealing with staff and or patient already under observation then a senior member of nursing staff will ask the infection control team if the principal investigator can invite them to participate in the research project.

Exclusion criteria

Participants enter the study under their free will. Participants can decide not to continue participating in the study at any time without penalty and will be excluded from any further observation or interview.

Patient selection criteria

Patients who are the subject of nursing care will be invited to participate in the study by a senior member of the nursing staff. Patients will be invited if they are:

Over the age of 18 years of age,

Non-English speaking participants will be encouraged to participate in research with the use of an interpreter to disclose the research aims, objectives and to obtain consent.

Patient's, who are unable to consent due to neurological impairment for example due to medication, will require next of kin consent.

Exclusion criteria

Participants enter the study under their free will and if they decide not to or their next of kin decides to discontinue participation they may do so without penalty and will be excluded from any further observation.

A7.6 Estimated Duration of Study

Period of time seeking ethics approval is September 2004 – September 2007. Proposed data collection is September 2004 - May 2005

A7.7 Proposed methods of Data analysis

The data will consist of audiotapes of interviews that will be transcribed verbatim, field note recordings as text and documents such as policy, protocol and literature available to intensive care nurses. The data will exist, as text and a process of thematic analysis will be used to identify themes and patterns in the data. The data will be reduced into themes that cannot be considered into any other category and verified by the participant.

A8 Procedures differing from routine clinical practice/ management of patient

The proposed research is about observing routine care of patient in the Intensive Care Unit.

A9. Termination Criteria

A9.1 Circumstances in which an individual would be withdrawn from the study by the investigator.

Participants have the right to withdraw from the research at any time. Where issues are sensitive in nature such as incidents of disruption, grief or on request, observation and interview will cease. Where there is conflict of interest, the participant's best interests will be given priority and protected.

A9.2 Circumstances in which the entire project would be terminated

It is not foreseen that the entire project would need to be terminated considering that the study does not involve any intervention.

A10. Monitoring

Internal monitoring

Throughout the research, monitoring of the project data will be undertaken by the principal investigator in conjunction with her supervisory panel to ensure that data is accurate, objective and handled correctly. Regular panel meetings will be held.

A11. Dissemination of Project Results

The information gained through this research project will be used to inform nurses and the infection control team. A better understanding of what informs nurses' infection control attitudes, knowledge and practices will lead to improved education techniques (at undergraduate level, post-graduate and in-service education). Improved education can lead to improved health outcomes and better working conditions for staff.

During the study the data collected will be stored in a locked cabinet in the principal investigator's office at the University of XXXXXXXXXXXX. All files containing information that could identify participants will be password protected. On completion the data will be stored according to NHMRC guidelines from the time of publication at Flinders University.

The principal investigator plans to publish the results of this research in a thesis for examination, and in peer review journals such as the American Journal of Infection Control, the Journal of Advanced Nursing and in Critical Care Journals. The findings will be submitted to national and international peer reviewed conferences. Information will be disseminated at XXXXXXXXXX through the use of XXXXXX. Finally, once the doctoral study has been completed information from the study will be summarised and reported to the staff involved in the project. All data will be de-identified and no information in any of these reports will contain information that would identify an individual.

A12. Compensation

N/A

A13. Report of Project

The principal investigator will provide a statement annually to the XXXXXXXX and on completion of the project.

A14. Patient Information Sheet

Information Sheet for patient, staff and the infection control team (See pages 22-33)

A15. Informed Consent form

Informed consent form for patient, staff and the infection control team (see pages 22-33)

Section B – Budget

B1 Funding and budget for the study

Please find on the next page the budget for this project

B1.1 Endorsement of Head(s) of Department(s) of Assisting Department(s)

The resources of other departments will not be required.

B1.2 Payment of volunteers

Participants will not receive any payment for the participation in this study. Morning or afternoon tea may be provided during the initial meetings with staff to discuss the research. Morning and afternoon tea will be provided, as discussion will be held during the staff's break period.

B2 Research Protocol Levy

$25 will be paid to the Human Research Ethics Committee on approval of this project.

Health and Ethics Committee (XXXXXXX)

Part B

Budget Outline for Research Project
Project title: "Exploring nurses infection control practices"
Chief Investigator: Allison Roderick

Income

1. Source of Funding

This project is completely self funded with the exception of the Research Student Maintenance which is a fund provided by Flinders University for PhD students to cover the costs of photocopying and computing
The Research Student Maintenance is currently pending

2. Details of Funding

Nil other sources of Funding

3. Consultancy fees and Additional payments

n/a

Total income	**Pending**

Expenditure

1. Personnel - specifically salaried for the project

none

2. Personnel - not employed specifically for this project

none

3. Personnel - honorary

none

4. Estimated service cost

none

5. Administrative costs

Photocopying of information sheets and consent forms	$ 500
Stationary and postage	$ 500
Transcription of Interviews	$1500

6. Data Handling/Computing

use of principal investigators own computer

7. Participant costs

none

8. Travel
none

9. Equipment
Tape recorder supplied by principal investigator

10. General Supplies and consumables
none

11. Other costs
none

12. Levy $25

Total Expenditure	**$2525**

The difference between total expenditure and total income is	**$2525 deficit**

Duration of the study is 3 years
From September 2004 to September 2007
Proposed data collection from September 2004- May 2005

Section C – Clearance

C1. Clearance from other Committees

Not applicable

C1.1 Drugs and Pharmaceuticals

Not applicable

C1.2 Radiation Safety

Not applicable

C1.3 Head of Department

Please find in the appendix a copy of approval letters from the following Heads of Department

A/Director of Nursing, Ms. XXXXX

A/Clinical Nurse Consultant, Mr. XXXXX

Director of Intensive Care Unit, Dr XXXXXX

The Infection Control Team, Dr XXXXXX

C1.4 Survey Resource Group

Not applicable

C1.5 Nursing Research

Please find attached a copy of Nursing Research Approval signed by Ms XXXXXXXXXX.

C1.6 Biosafety Committee

Not applicable

Section D – Drugs and Devices

Section D1 and D2 is not applicable to this research project

Section E - Ethics approval for Grants

This project does not involve any grant applications

Reference List

Kim P, Roghmann M, Perencevich E and Harris A (2003), Rates of hand disinfection associated with glove use, patient isolation, and changes between exposure to various body sites, *American Journal of Infection Control*, Vol 31 (2), April, 97-103.

Kollef M and Fraser V (2001), Antibiotic resistance in the Intensive Care Unit, *Annals of Internal Medicine*, Vol 134 (4) Feb 20, 298-314.

National Health Medical Research Council (Aust) and Australian Council of AIDS 1998. Infection Control in the Health Care Setting: Guidelines for the prevention of transmission of infectious diseases. Australian Government Public Service, Canberra.

Patton M (1990), *Qualitative Evaluation and Research Methods*, 2nd Ed Sage Publications, USA.

Warren K and Fraser V (2001), Infection control measures to limit antimicrobial resistance, *Critical Care Medicine*, Vol 29 (4) April, N128-N134.

Patient Information Sheet

"Exploring nurses infection control practices"

I am a nurse currently enrolled at Flinders University in a doctoral program. You are invited to be part of a research project (a requirement of my studies) exploring nurses' infection control practices. Infection control practice is a broad topic yet it is everyone's concern. This poses a special concern to nurses as they often have the most contact with people.

This study may not benefit you directly but may lead to a better understanding of nurses' infection control practices.

I am currently undertaking a period of observation of the nursing care of a patient in the Intensive Care Unit. In so doing I need to watch the nurses as they provide your care. This will mean observing as routine care and procedures are done, and at times, recording interactions between you and the nurse. Up to two observation periods per day are planned for up to two hours each.

This study is about nurses and I will record how they care for you. In my notes any means by which you can be identified will be removed.

Your involvement in this study is entirely voluntary and your non-participation will not affect your treatment at the XXXXXXXXX Hospital in any way. Should you decide to withdraw from the study you may do this freely and without any prejudice to any future treatment at the XXXXXXX Hospital.

All records containing personal information will remain confidential and no information, which could lead to your identification, will be released. Information from this study will be used for the completion of the Doctoral thesis and publication.

The researcher is obliged to inform appropriate personnel (Clinical Nurse Consultant, Director of Nursing, XXXXX Human Research Ethics Committee

or the Medical Director of the Intensive Care Unit) if unethical or unsafe practices become apparent.

Should you have any queries about the project, before, during or after the study, you may contact me (Allison Roderick) on 0423124740.

This study has been reviewed by the Flinders Clinical Research Ethics Committee and the XXXXXX Human Research Ethics Committee. Should you wish to discuss the study with someone not directly involved, in particular in relation to matters concerning policies, your rights as a participant, or should you wish to make a confidential complaint, you may contact the Department of Health Ethics Committee Secretary on XXXXXXX or by phoning XXXXXXXX. Alternatively Professor Paul Arbon (Senior Investigator) may be contacted on XXXX XXXX.

Allison Roderick

Consent Form to Participate in a Research Project

I, _____
(name of participant)

(complete if subject unable to provide consent for themselves)
being the _____ of _____
state relationship name of patient

of _____ _____ _____
street suburb/town
postcode

have been asked to consent to my participation/relative's participation in a research project entitled:

Exploring nurses infection control practices

In relation to this project I have read the Patient Information Sheet and have been informed of the following points:

1. Approval has been given by the XXXX Health Ethics Committee.

2. The aim of the project is to better understand nurses' infection control practices.

3. The results obtained from the study may or may not be of direct benefit to my management.

4. The procedure will involve Allison Roderick observing patient care as routine nursing care is given to a patient in the Intensive Care Unit of the XXXXXX Hospital.

5. There are some possible adverse effects or risks related to this project which include: observation may cause people to feel uncomfortable, routine care may occur during sensitive times and reveal sensitive and personal issues.

6. My involvement in this project may be terminated if any of the following circumstances develop: observation distresses the participant, during sensitive issues or on request.

7. Should I develop a problem which I suspect may have resulted from my involvement in this project I am aware that I may contact Allison Roderick.

8. Should I have any problems or queries about the way in which the study was conducted, and I do not feel comfortable contacting the researcher, I am aware that I may contact the Department of Health Ethics Committee Secretary on XXXXX or phone XXXXX XXXX

9. I can refuse to take part in this project or withdraw from it at any time without affecting my care.

10. Participation in this project will not result in any extra medical and hospital cost to me.

11. I understand that the results of the research will be made accessible and that my involvement and my identity will not be revealed.

12. I have been given an information sheet detailing the research project.

After considering all these points, I accept the invitation to participate in this project.

I also state that I have/have not participated in any other research project in the past 3 months. If I have, the details are as follows:

_____

Date: _____ **Witness:**_____
(please print name)

Signature:_____ _____
(of participant) (of witness)

Investigator's Signature:_____

Staff Information Sheet

"Exploring nurses infection control practices"

I am a nurse currently enrolled at Flinders University in a doctoral program. You are invited to be part of a research project (a requirement of my studies) exploring nurses' infection control practices. Infection control practice is a broad topic yet it is everyone's concern. This poses a special concern to nurses as they often have the most contact with people.

This study may not benefit you directly but may lead to a better understanding of nurses' infection control practices.

I am currently undertaking a period of observation of the nursing care of a patient in the Intensive Care Unit (ICU). In so doing I need to watch you as you provide patient care. This will mean observing as routine care and procedures are done in ICU, recording interactions between you and the patient. Up to two observation periods per day are planned for up to two hours each.

This study is about nurses and I will record how you care for a patient. In my notes any means by which you can be identified will be removed.

During the course of the study you may be asked to participate in informal interviews from 10 minutes and up to 45 minutes. This will occur at a time and in a location of your choice. This will be audio-recorded and transcribed verbatim. You will be given a copy of the transcript and opportunity to comment on the interview and themes that arise.

Your involvement in this study is entirely voluntary and your non-participation will not affect your employment at the XXXXX Hospital in any way. Should you decide to withdraw from the study you may do this freely and without any prejudice to your employment at the XXXXX Hospital.

All records containing personal information will remain confidential and no information, which could lead to your identification, will be released.

Information from this study will be used for the completion of the Doctoral thesis and publication.

The researcher is obliged to inform appropriate personnel (Clinical Nurse Consultant, Director of Nursing, Human Research Ethics Committee, the Medical Director of the Intensive Care Unit, Professor XXXXX or Professor Paul Arbon) if unethical or unsafe practices become apparent.

Should you have any queries about the project, before, during or after the study, you may contact me (Allison Roderick) on 0423124740.

This study has been reviewed by the Flinders Clinical Research Ethics Committee and the Human Research Ethics Committee. Should you wish to discuss the study with someone not directly involved, in particular in relation to matters concerning policies, your rights as a participant, or should you wish to make a confidential complaint, you may contact the Health Ethics Committee Secretary on XXXXXXX or by phoning XXXX XXXX. Alternatively Professor Paul Arbon (Senior Investigator) may be contacted on XXXXXXX.

Allison Roderick

Consent Form to Participate in a Research Project

I, _____
(name of participant)

of _____ _____ _____
street suburb/town
postcode

have been asked to consent to my participation in a research project entitled:

Exploring nurses infection control practices

In relation to this project I have read the Staff Information Sheet and have been informed of the following points:

1. Approval has been given by the Health Ethics Committee.

2. The aim of the project is to better understand nurses' infection control practices.

3. The results obtained from the study may or may not be of direct benefit to my practice.

4. The procedure will involve Allison Roderick observing my patient care as routine nursing care is given to a patient in the Intensive Care Unit of the XXXXXXX Hospital. Also participation in informal interviews that will be audio-recorded and transcribed verbatim.

5. There are some possible adverse effects or risks related to this project which include: observation may cause people to feel uncomfortable, routine care may occur during sensitive times and reveal sensitive and personal issues.

6. My involvement in this project may be terminated if any of the following circumstances develop: observation distresses the participant, during sensitive issues or on request.

7. Should I develop a problem, which I suspect may have resulted from my involvement in this project, I am aware that I may contact Allison Roderick.

8. Should I have any problems or queries about the way in which the study was conducted, and I do not feel comfortable contacting the researcher, I am aware that I may contact the Health Ethics Committee Secretary on XXXXX or phone XXXX XXXX.

9. I can refuse to take part in this project or withdraw from it at any time without affecting my employment.

10. I understand that the results of the research will be made accessible and that my involvement and my identity will not be revealed.

11. I have been given an information sheet detailing the research project.

After considering all these points, I accept the invitation to participate in this project.

I also state that I have/have not participated in any other research project in the past 3 months. If I have, the details are as follows:

_____

Date: _____ **Witness:**_____
(please print name)

Signature:_____ _____
(of participant) (of witness)

Investigator's Signature:_____

Infection Control Team Information Sheet

"Exploring nurses infection control practices"

I am a nurse currently enrolled at Flinders University in a doctoral program. You are invited to be part of a research project (a requirement of my studies) exploring nurses' infection control practices. Infection control practice is a broad topic yet it is everyone's concern. This poses a special concern to nurses as they often have the most contact with people.

This study may not benefit you directly but may lead to a better understanding of nurses' infection control practices.

I am currently undertaking a period of observation of the nursing care of a patient in the Intensive Care Unit. In so doing I would like to watch as you participate in nursing care, in the giving: of information, education and direction in relation to infection control.

This study is about nurses' infection control practices and what influences their care. In my notes any means by which you can be identified will be removed and your involvement will be recorded as "The infection control team" rather than you as an individual.

During the course of the study you may be asked to participate in informal interviews from 10 minutes and up to 45 minutes. This will be audio-recorded and transcribed verbatim. You will be given a copy of the transcript and opportunity to comment on the interview and themes that arise.

Your involvement in this study is entirely voluntary and your non-participation will not affect your employment at the XXXXXX Hospital in any way. Should you decide to withdraw from the study you may do this freely and without any prejudice to your employment at the XXXXX Hospital.

All records containing personal information will remain confidential and no information, which could lead to your identification, will be released.

Information from this study will be used for the completion of the Doctoral thesis and publication.

The researcher is obliged to inform appropriate personnel (Clinical Nurse Consultant, Director of Nursing, Human Research Ethics Committee or the Medical Director of the Intensive Care Unit) if unethical or unsafe practices become apparent.

Should you have any queries about the project, before, during or after the study, you may contact me (Allison Roderick) on 0423124740.

This study has been reviewed by the Flinders Clinical Research Ethics Committee and the Human Research Ethics Committee. Should you wish to discuss the study with someone not directly involved, in particular in relation to matters concerning policies, your rights as a participant, or should you wish to make a confidential complaint, you may contact the Department of Health Ethics Committee Secretary on XXXXXXX or by phoning XXXXXXX. Alternatively Professor Paul Arbon (Senior Investigator) may be contacted on XXXXX XXXXX.

Allison Roderick

Consent Form to Participate in a Research Project

I, _____
(name of participant)
of _____ _____ _____
street suburb/town
postcode

have been asked to consent to my participation in a research project entitled:

Exploring nurses infection control practices

In relation to this project I have read the Information Sheet and have been informed of the following points:

1. Approval has been given by the Health Ethics Committee.

2. The aim of the project is to better understand nurses' infection control practices.

3. The results obtained from the study may or may not be of direct benefit to nurses' infection control practices.

4. The procedure will involve Allison Roderick observe my involvement in nursing care in the providing of information, advise and education in the Intensive Care Unit of the XXXXXXX Hospital. Also participation in interviews that will be audio-recorded and transcribed verbatim.

5. There are some possible adverse effects or risks related to this project which include: observation may cause people to feel uncomfortable and reveal sensitive and personal issues.

6. My involvement in this project may be terminated if any of the following circumstances develop: observation distresses the participant, during sensitive issues or on request.

7. Should I develop a problem which I suspect may have resulted from my involvement in this project I am aware that I may contact Allison Roderick.

8. Should I have any problems or queries about the way in which the study was conducted, and I do not feel comfortable contacting the researcher, I am aware that I may contact the Department of Health Ethics Committee Secretary on XXXXXX or on phone number XXXXX XXXX

9. I can refuse to take part in this project or withdraw from it at any time without affecting my employment.

10. I understand that the results of the research will be made accessible and that my involvement and my identity will not be revealed.

11. I have been given an information sheet detailing the research project.

After considering all these points, I accept the invitation to participate in this project.

I also state that I have/have not participated in any other research project in the past 3 months. If I have, the details are as follows:

_____

Date: _____ **Witness:**_____
(please print name)

Signature:_____ _____
(of participant) (of witness)

Investigator's Signature:_____

Appendix

Letters of approval and support from the following authorities

A/Professor Trudy Rudge

Approval letter from the Flinders Clinical Research Ethics Committee

A/Director of Nursing, Ms. XXXXX

A/Clinical Nurse Consultant, Mr. XXXXXX

Director of Intensive Care Unit, Dr XXXXXXX

The Infection Control Team, Dr XXXXXXX

Flinders Medical Centre
Bedford Park South Australia 5042

Telephone (08) 8204 5511
International 618 8204 5511

Flinders Clinical Research Ethics Committee
FWA00001785

Telephone (08) 8204 4507
Facsimile (08) 8204 5834
email: Carol.Hakof@fmc.sa.gov.au

28 October 2003

MEMORANDUM

TO: Ms. A. Roderick, 2/55 Coorara Ave, Payneham South, SA 5070

FROM: Ms. C. Hakof, Executive Officer, Flinders Clinical Research Ethics Committee

TOPIC: **Research Application 168/023**

Your attention is drawn to the following extract from the Minutes of the Committee's meeting held 13 October 2003.

5734.17 Research Application 168/023 – Ms. A. Roderick
Exploring the experience of nurses required to use additional precautions.
Reviewer: Mr. K. Schmitz

Revised patient, nursing and infection control team information sheets were received and approved.

C. Hakof

FLINDERS UNIVERSITY
ADELAIDE • AUSTRALIA

Dr Trudy Rudge
Associate Professor and Associate Dean: Higher Degree Program
School of Nursing and Midwifery
Faculty of Health Sciences

GPO Box 2100
Adelaide 5001 Australia

Telephone: (+61 8) 8201 5353
8201 3409
Fax: (+61 8) 8276 1602
Email: Trudy.Rudge@flinders.edu.au

29 July 2004

To Whom It May Concern:
Re: Ms Allison Roderick

I am writing to confirm that Ms Allison Roderick's project, 'Exploring nurses' infection control practices' has ethical approval from the Flinders University Social and Behavioural Research Ethics Committee. The project is under the joint supervision of myself and Dr Charmaine Power.

It is recorded that the student has read and is familiar with the guidelines for the ethical conduct of research as set out by the NH&MRC. This research will be supervised under those guidelines. Storage of data and consent agreements will occur as set out in the accompanying Human Research Ethics Application. At the completion of the project all data will be de-identified and stored for the period of time as set by NH&MRC guidelines within the secure storage in the School of Nursing and Midwifery at Flinders University.

Regards,

Trudy Rudge

Trudy Rudge RN, RMHN, BA(Hons Anthropology), PhD
Associate Dean (Higher Degree Programs)

APPROVAL FROM HEAD OF DEPARTMENT

Approval for participation in a research project should be obtained from your Head of Department before your project is submitted for consideration by the Ethics Committee. Details of your project should be provided at the same time as this application is lodged.

Project Title: Exploring nurses infection control practice

Name(s) of Applicant(s):

Allison Roderick

Department from which approval is sought: Surgical Services

Signature of Applicant(s): A Roderick

Head of Department Declaration:

I have discussed this study with the investigator and have agreed to provide assistance in the form of:
(brief description)

Name:

Department: Ag Dir Surgical Services

Position: Ag Director of Nursing

Signature:

Date:

29 July 2004

To Whom It May Concern:

Re: Proposed Research

The Principal investigator Allison Roderick has discussed the following research project "Exploring nurses infection control practices". In our opinion she has explained the project to us to our satisfaction and we hereby give approval for the proposed research project to be conducted in the Intensive Care Unit of Hospital.

Director
Intensive Care Unit

Acting Clinical Nurse Consultant
Intensive Care Unit

03 August 2004

Allison Roderick

To Whom It May Concern:

Re: Proposed Research

The Principal investigator Allison Roderick has discussed the following research project "Exploring nurses infection control practices". In our opinion she has explained the project to our satisfaction and we hereby give approval for the proposed research project to involve the Infection Control Team when they visit the Intensive Care Unit of Hospital.

Prof ID & Microbiology CNC Infection Control CNC Infection Control

Letter of approval from ethics committee

Ms Allison Roderick

Dear Ms Roderick

The [redacted] h Ethics Committee considered the proposed study 'Exploring Nurses in Section Control Practices' at the meeting held on 13 September 2004. Ethics Committee Submission [redacted]4 refers.

The Committee appreciated your attendance at the meeting held on 13 September 2004 and your written response addressing the Committee's concerns.

The Committee approved the study including the Patient Information Sheet, Consent Form (Version: PC 01.08.04), Staff Information Sheet, Staff Consent Form (Version: NC 01.08.04), Infection Control Team Information Sheet and Infection Control Team Consent Form (Version: IC 01.08.04).

I have attached an Outcome of Consideration of Protocol for your records.

You may recall that the[redacted]s for Submission of application require you to complete payment of the levy when the study has been approved by the Ethics Committee.

Please forward $27.50 to the Secretariat, [redacted] Research Ethics Committee, [redacted] as soon as possible. An Invoice is attached for your information.

Yours sincerely [redacted]

Appendix 3: Entire account of Nicole's care

Today ICU feels busy. There are 6 ventilated patients, 8 high dependency patients, 5 patients are expected to be transferred out of ICU and 2 patients are due to arrive. It's 11.30 and the morning medical round is still in progress. Nicole had been admitted to ICU from one of the wards just two days ago with sepsis of unknown origin, possibly a UTI or infected diverticulum. She was initially managed on her arrival to ICU with CPAP but her respiratory function deteriorated and she was intubated yesterday at 10 am.

Today Nicole is being cared for by Karen, the bay is a blur with activity as Nicole is unstable. Currently, Nicole is unconscious due to sedation to enable the artificial life support or the mechanical ventilator (SIMV PC18) to function. Her kidneys have failed and she is on a dialysis machine continuously. As a consequence of this machine a side effect is that her body is being actively cooled, therefore requiring her to be rewarmed with a special warming blanket that completely covers her body and only her head and wrist is visible. The blue ICU trolley is cluttered with three boxes of gloves, medications, dialysis fluids, dialysis orders, the CPAP mask from prior to her intubation (which happened at 10 am yesterday), a sterile IDC, waterless hand wash system (both Hand Rub and Hand gel). The trolley also has Karen's drink bottle, a jug for measuring cardiac outputs, syringes, tissues, cup and spoon from prior to intubation, and medications from the ward. Nicole is constantly monitored and other than being attached to the ventilator, monitor and the dialysis machine she also is attached to nine infusion pumps delivering medications to improve her cardiac output and blood pressure, medication to keep Nicole sedated to enable the artificial breathing to occur through the ventilator and other medications. Despite all this activity Karen makes time to "do a back wash".

Karen organises an orderly and another nurse to assist with the back wash. Adjusting an infusion, Karen provides a small bolus of sedation to keep Nicole settled while the staff can roll her over to enable her to have her back washed. Taking charge Karen counts 1... 2… 3 and together the nurse and the orderly roll Nicole over onto her side. The orderly holds Nicole's body on her side while the other nurse supports Nicole's head and the endotracheal tube in position, the orderly and the nurse both wear gloves. Karen pulls back the sheets exposing Nicole's naked body. Karen moves quickly between dialysis, ventilator and the bed. Nicole is unstable, so everyone's eyes are on the monitor. The monitor "bongs and beeps" loudly. Quickly applying gloves Karen, removes the pillows that have been under Nicole's back and buttocks and begins washing and places them at the end of the bed Nicole's. While doing so Karen constantly looks up at the monitor and then back to Nicole. Smoothing out the sheets she wipes Nicole down with a towel, working her way down from shoulders to buttocks. Again she smooth's out the sheets, Karen now moves over to the other side of the patient where the orderly is holding Nicole on her side and begins adjusting the pumps, as she does she is constantly checking the monitor. Silencing the alarms with a touch of a button she returns to the other side, as she does the assisting nurse discusses the unstable blood pressure. As they talk about the blood pressure they motion to put Nicole back onto her back and without words, counting or movement Nicole's body is returned to the bed so that she now lies flat in the bed. Adjusting her wrist watch Karen lets the orderly know that he can now leave. Grabbing the pillows that she had thrown on to the end of the bed she throws them on the floor and adjusts the top sheet, making them neat and ensuring that Nicole's naked body is completely covered.

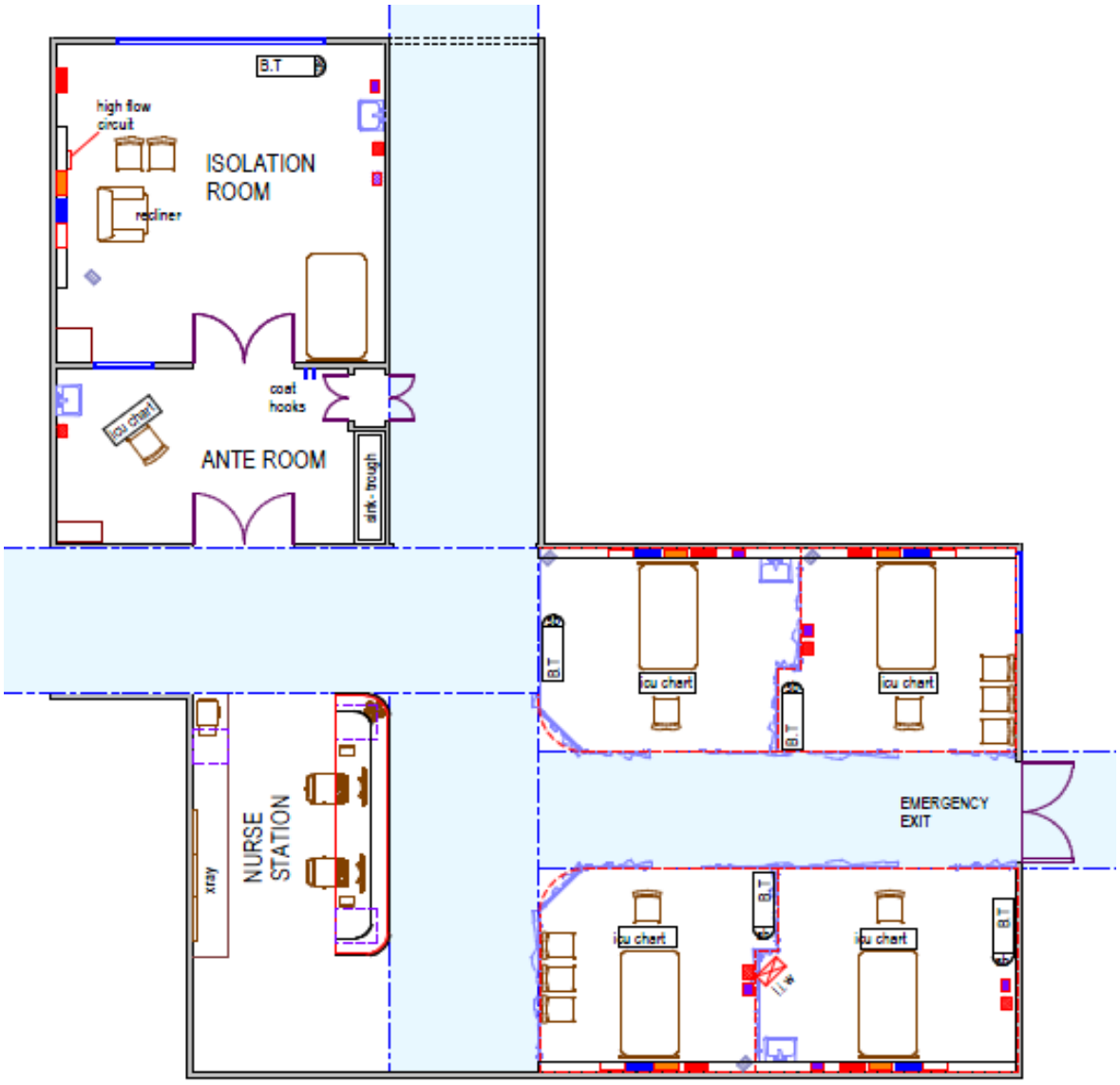
She opens the medication chart but is interrupted by the phone ringing at the nurses' station. Karen answers the phone and then returns to the chart then goes to the medication room and gets the desired medication. Karen asks the nurse next door to "check a medication", the nurse next door comes over into the back and checks the mediation against the chart. Opening syringes and needles she connects the saline ampoule the syringe drawing up its contents and then connecting it to the ampoule of medication in her hand. She leaves the syringe on the trolley and collects some paracetamol from the drawer. Meanwhile the nasogastric feed alarms. Karen adjusts the feed chamber, she watches, resting her arms on the head of the bed, and again she adjusts the feed pump. Moving back to the trolley she opens the paracetamol and places it in the medication cup with some water. The social worker arrives, and Karen chats to the social worker as she puts on another pair of gloves.

Fully dissolved she draws back the medication in the ampoule into the syringe and disconnects the needle and disposes of it in the sharps bin. Collecting an alcohol wipe from the ICU trolley she wipes does the hub of the giving set connected to the CVC. While she administers the medication she also talks to the nurse next door about checking the medications.

Removing her gloves, Karen checks the monitor. Moving back to the trolley she gets a syringe, placing gloves and goggles on she aspirates the nasogastric tube and administers the paracetamol and reconnects the nasogastric feed. Meanwhile she continues to chat to the other nursing staff about the state of the ward. She turns back on the nasogastric feed pump and the dialysis machine begins alarming. Moving back to the trolley she collects a glove and applies it to one hand, checking the heparin attached to the dialysis she comments "no good" and then moves to the sterile effluent bag resting on the dialysis machine, opening the bag she clamps off the effluent bag resting it on the floor she connects the new effluent bag. As she does she adjusts the dialysis screen, moving her goggles up to her head she calls out to the nurse in the bay "out for a bit", as she does she carries the effluent bag. She returns from the sluice room gloves off, she returns to Nicole's bay squirting antimicrobial hand rub into her hands.

Karen takes her gloves off and immediately replaces them with another pair and begins setting up a nasogastric feed (connecting giving set to feed holder and connecting it to the feeding pump). Disconnecting the drainage bag that had freely drained the contents of Nicole's stomach from the nasogastric tube, she connects the nasogastric giving set to the nasogastric tub. Discards the drainage bag in the yellow (infectious waste bin) and then removes her gloves. (Field notes February)

Appendix 4: Floor plan of a typical 4-bed bay and the isolation room.



Appendix 5: Capital Hospital's Nursing Practice Standards

NURSING SERVICE
Nursing Practice Standards

ADMINISTRATION

TITLE **ROLE OF THE TEAM MEMBER** 1.8.5 / ICU

Staff are allocated to one or more patients and are responsible for implementing the individual nursing care as outlined in the care plan. This includes:

- Accurate documentation of all observations.
- Safe administration of IV therapy and drugs.
- Maintenance of patient comfort and hygiene, ensure adequate analgesia.
- Psychological support to patients and next of kin.
- Provision of adequate rest periods between procedures.

COMMENCEMENT OF EACH SHIFT

Receive report from previous shift.
Check intravenous therapy and medication sheet with previous team member. Ensure:

- Infusions are on appropriate CVC port and assess computability
- Adequate infusion orders for next 24 hrs.
- Correct flask and rate.
- Flasks are changed every 24 hrs.

Initial physical assessment of patient: appearance, level of consciousness, vital signs, bowel sounds, peripheral circulation including pulses and presence of oedema.
Check 0_2 and suction equipment.
Check ventilation settings and record in red. Set alarm parameters.
Calculate drug dosage in micrograms/kg/minute or micrograms/minute.
Maintain fluid balance, ensure accuracy.
Check monitoring system, calibrate all lines (cal factor 200mmHg) and set alarm parameters. Assess A/line accuracy with NIBP or manual cuff. Document position of ETT, NGT, CVC, Swan Ganz and IVC.
Ensure all tubes and lines are secure.
Update and sign nursing care plan, attend dressings/procedures as required.
Inform the team leader if you are not familiar with procedures or equipment.

HOURLY

Vital signs.
Ventilator observations including alarm settings.
Fluid intake and output.
Check function of IV and enteral feeding pumps.
Ensure pressure bags are maintained at 300mmHg.
Check patency of drains and low wall suction.
Check H_20 levels of ICC, document presence of swing and bubble.
Check wounds and dressings.
Specific patient observations eg. neurological, circulation, endocrine.

2ND HOURLY

Chest physiotherapy and tracheal suction.
Pressure area care/repositioning.
Oral hygiene.
Eye Care.

4TH HOURLY
Nasal care.
Nasogastric aspiration.
CVP measurement.
PAWP and cardiac output studies.

DAILY
BSL (more frequently if required).
Neurological assessment.
IDC care.
Assess and secure A-Line splints.
Full sponge and prn.
Facial shave male patients.
Position patient at 30-45° or sit out of bed (dependent on patient condition).
Measure drainage from all drains, empty or label at 1100 hrs and 2300 hrs.
Total fluid balance chart (FBC) at 2300 hrs, complete weekly FBC.
Dressings as required.

EACH SHIFT
Restock and clean bed area to maintain a safe working environment and reduce the risk of infection.
Enter appropriate details relating to care in patient's progress notes.
Ensure patient has sufficient IV fluids and IV orders.
Check IV therapy is correct and signed for.
Check drugs have been given and signed for.
Update nursing care plan.

MORNING SHIFT
Full sponge if required.
Medical Officers round.
Morning tea 0915 or 0945 hrs.
Lunch 1315 hrs following bedside handover.

EVENING SHIFT
Continue patient management.
Attend allocated equipment check (extra duty).
Afternoon tea 1500 hrs.
Dinner 1700, 1745 or 1830 hrs.

NIGHT SHIFT
Continue patient management.
Total FBC at 2300 hrs, complete weekly fluid balance chart including documentation of patient's bowel status.
Organise patient notes and treatment sheets.
Dextrostix/ABG/Blood samples at 0500 hrs.
Full ward urinalysis.
Assist with CXR at 0600 hrs.
Change pall filter and bronchodilator circuits at 0600 hrs.
Supper 2300 or 2330 hrs.
Meal break 0200, 0300 or 0400 hrs.

Appendix 6: Aseptic technique from Capital Hospital Nursing Practice Standards Manual

Area Originating Standard	*Replaces No.*	*Standard No. : Issue No.*
Infection Control/Clinical Nursing		

Aseptic Technique

PRINCIPLES
Asepsis and antisepsis is mandatory in reducing the risk of nosocomial infection.

Definition

- **Asepsis/aseptic** refers to the absence of disease producing microorganisms or those practices and techniques designed to render and maintain areas free from microorganisms or sterile.
- **Antisepsis/antiseptic** refers to all those practices and techniques designed to reduce the numbers of microorganisms present or restrict their spread.

PURPOSE

- That the principles of asepsis and antisepsis be practised consistently and conscientiously at

COMPETENCY
Medical officer
Registered nurse
Enrolled nurse
Student nurse under the direct supervision of a registered nurse

PROCESS

- Standard Precautions must be adhered to at all times.
- Thorough handwashing must be carried out before and after procedure, with or without the wearing of gloves.
- Always face the sterile field. Do not turn your back or sit on a sterile field.
- Keep sterile equipment above waist level and above table level.
- Do not speak, cough, sneeze or laugh over a sterile field. If it is necessary to do any of these, turn your head away from the sterile field.
- Prevent excessive air currents around the sterile area, especially no polishing or vacuuming.
- Never reach across the field. Instead:
    - Move around the field, while continuing to face the field, or,
    - Reach around the edges of the sterile field, or

- Cautiously turn the entire sterile field by touching either the edges of the bottom wrap or by reaching underneath the bottom wrapper.
- Keep unsterile objects from the sterile field.
- Handle liquids cautiously near the sterile field to prevent drapes or wrappers from becoming wet.
- Dry sterile objects (eg sterile towels) may have one surface that is contaminated and one surface that are sterile.
- The area up to 2.5cm (1 inch) from the edge of a sterile field is considered unsterile.
- Never assume that an object is sterile. Always check the sterilisation indicator on the external wrapper.
- Always check the integrity of the external wrapping for possible perforations.
- Always check the sterility expiration date on the external package.

Nursing Alert:
Do not use the sterile object if there is:
- **no sterilising indicator tape;**
- **no sterility expiration date;**
- **doubt about the integrity of the external wrapper.**

- The setting-up of sterile stock must only occur **immediately prior** to the performance of the procedure.
- Do not trust the sterility of an object wrapped in cotton longer than four (4) weeks after sterilisation.
- Do not trust the sterility of an object wrapped in paper or a paper bag for longer than three (3) months.
- Do not trust the sterility of an object in a transparent bag for longer than twelve (12) months.
- Cleanse wound working from clean to contaminated areas.

OUTCOME

The principals of asepsis and aseptic technique are followed at all times.

The practice of asepsis and antiseptic is demonstrated by a decrease in the number of nosocomial infections.

For information on hand washing see Section 1, page 11-15 of 54 pages, The , Infection Control Manual.

For information for the use of Personal Protective Attire Section 5, Page 7-10 of 44, page, of , Infection Control Manual.

References:

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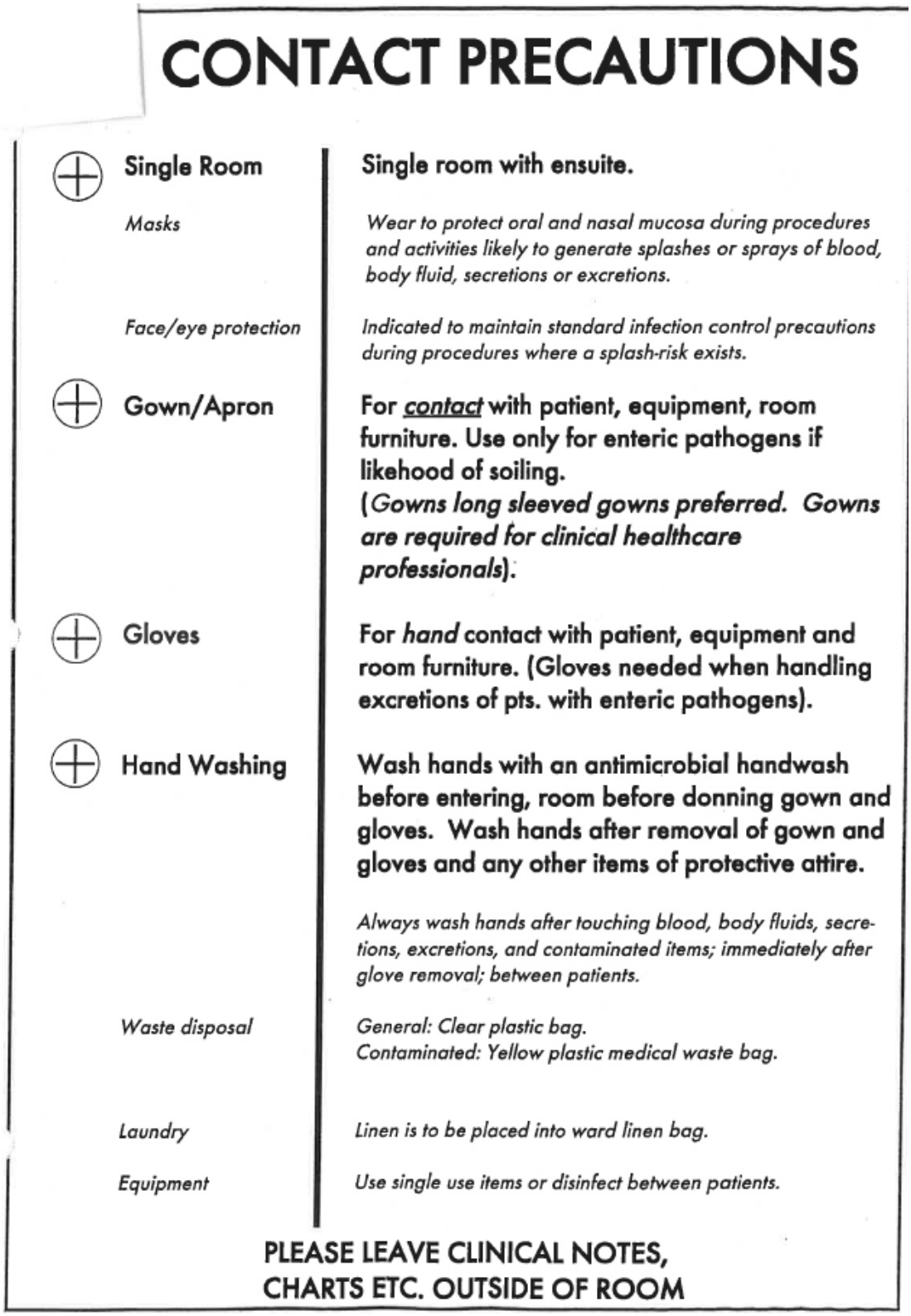
Cross Reference with ExcelCare UoC -
UoC: Title:
UoC number:

Reviewed by:

Nursing Practice Standards & Quality Committee

Review date
2002

Appendix 7: Capital Hospital's contact precautions signs.



CONTACT PRECAUTIONS

Single Room	**Single room with ensuite.**
Masks	*Wear to protect oral and nasal mucosa during procedures and activities likely to generate splashes or sprays of blood, body fluid, secretions or excretions.*
Face/eye protection	*Indicated to maintain standard infection control precautions during procedures where a splash-risk exists.*
Gown/Apron	**For *contact* with patient, equipment, room furniture. Use only for enteric pathogens if likehood of soiling. (*Gowns long sleeved gowns preferred. Gowns are required for clinical healthcare professionals*).**
Gloves	**For *hand* contact with patient, equipment and room furniture. (Gloves needed when handling excretions of pts. with enteric pathogens).**
Hand Washing	**Wash hands with an antimicrobial handwash before entering, room before donning gown and gloves. Wash hands after removal of gown and gloves and any other items of protective attire.**
	Always wash hands after touching blood, body fluids, secretions, excretions, and contaminated items; immediately after glove removal; between patients.
Waste disposal	*General: Clear plastic bag.* *Contaminated: Yellow plastic medical waste bag.*
Laundry	*Linen is to be placed into ward linen bag.*
Equipment	*Use single use items or disinfect between patients.*

PLEASE LEAVE CLINICAL NOTES, CHARTS ETC. OUTSIDE OF ROOM

CONTACT PRECAUTIONS

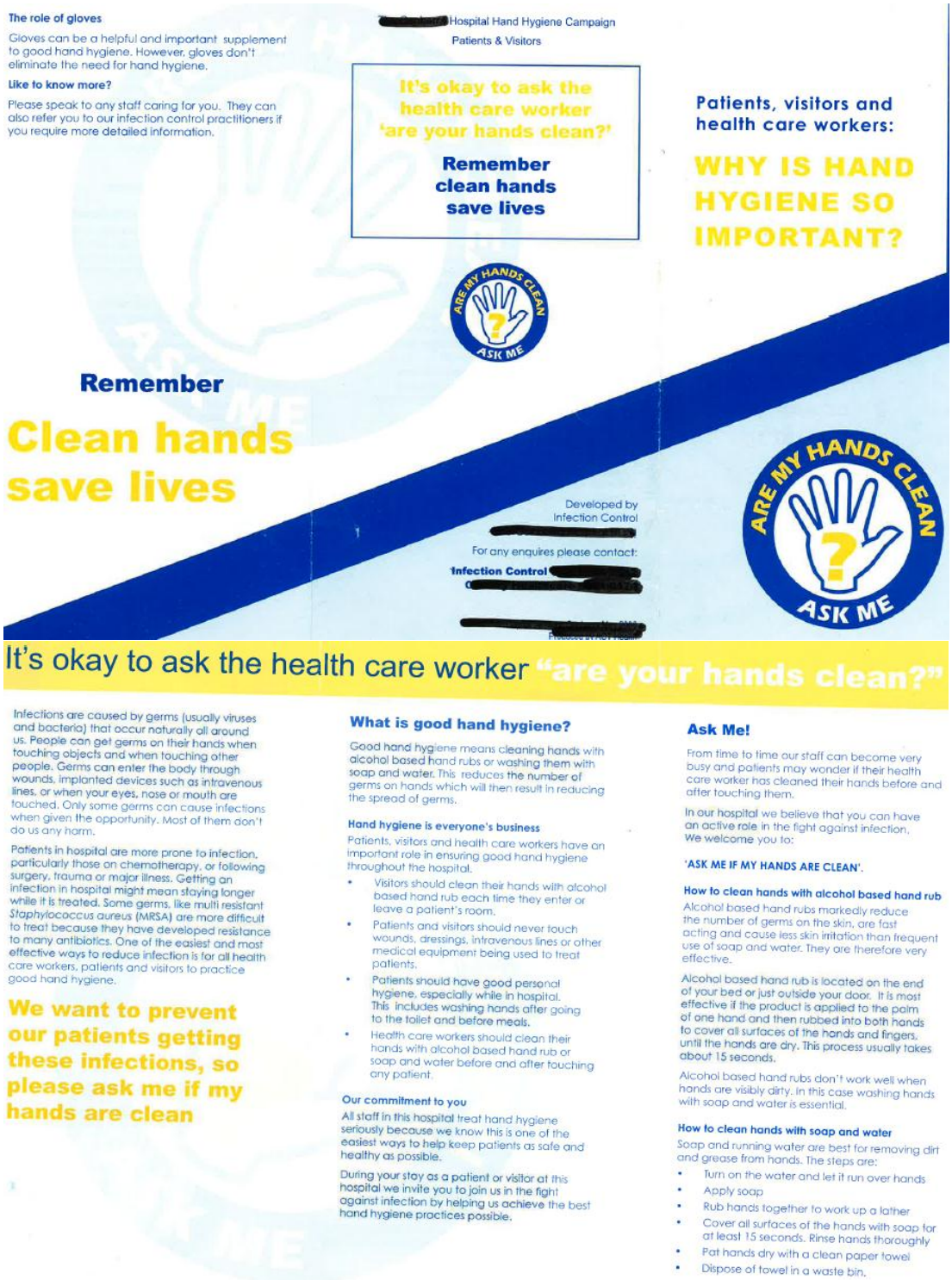
Please

Wash your hands on leaving this room.

CONTACT PRECAUTIONS are indicated for MRSA,VRE, other multi drug resistance organisms and for infected wounds and abscesses not contained by dressings. Bronchiolitis/RSV, C.difficile, Hepatitis A and other enteric organisms (if wearing a nappy or incontinent), shingles (Herpes Zoster) and other conditions as directed by Infection Control Practitioner.

Revised June 2000

Appendix 8: Hand hygiene campaign brochure given to patients



The role of gloves

Gloves can be a helpful and important supplement to good hand hygiene. However, gloves don't eliminate the need for hand hygiene.

Like to know more?

Please speak to any staff caring for you. They can also refer you to our infection control practitioners if you require more detailed information.

[redacted] Hospital Hand Hygiene Campaign

Patients & Visitors

It's okay to ask the health care worker 'are your hands clean?'

Remember clean hands save lives

Patients, visitors and health care workers:

WHY IS HAND HYGIENE SO IMPORTANT?

Remember

Clean hands save lives

Developed by Infection Control [redacted]

For any enquires please contact:

Infection Control [redacted]

It's okay to ask the health care worker "are your hands clean?"

Infections are caused by germs (usually viruses and bacteria) that occur naturally all around us. People can get germs on their hands when touching objects and when touching other people. Germs can enter the body through wounds, implanted devices such as intravenous lines, or when your eyes, nose or mouth are touched. Only some germs can cause infections when given the opportunity. Most of them don't do us any harm.

Patients in hospital are more prone to infection, particularly those on chemotherapy, or following surgery, trauma or major illness. Getting an infection in hospital might mean staying longer while it is treated. Some germs, like multi resistant *Staphylococcus aureus* (MRSA) are more difficult to treat because they have developed resistance to many antibiotics. One of the easiest and most effective ways to reduce infection is for all health care workers, patients and visitors to practice good hand hygiene.

We want to prevent our patients getting these infections, so please ask me if my hands are clean

What is good hand hygiene?

Good hand hygiene means cleaning hands with alcohol based hand rubs or washing them with soap and water. This reduces the number of germs on hands which will then result in reducing the spread of germs.

Hand hygiene is everyone's business

Patients, visitors and health care workers have an important role in ensuring good hand hygiene throughout the hospital.

- Visitors should clean their hands with alcohol based hand rub each time they enter or leave a patient's room.
- Patients and visitors should never touch wounds, dressings, intravenous lines or other medical equipment being used to treat patients.
- Patients should have good personal hygiene, especially while in hospital. This includes washing hands after going to the toilet and before meals.
- Health care workers should clean their hands with alcohol based hand rub or soap and water before and after touching any patient.

Our commitment to you

All staff in this hospital treat hand hygiene seriously because we know this is one of the easiest ways to help keep patients as safe and healthy as possible.

During your stay as a patient or visitor at this hospital we invite you to join us in the fight against infection by helping us achieve the best hand hygiene practices possible.

Ask Me!

From time to time our staff can become very busy and patients may wonder if their health care worker has cleaned their hands before and after touching them.

In our hospital we believe that you can have an active role in the fight against infection. We welcome you to:

'ASK ME IF MY HANDS ARE CLEAN'.

How to clean hands with alcohol based hand rub

Alcohol based hand rubs markedly reduce the number of germs on the skin, are fast acting and cause less skin irritation than frequent use of soap and water. They are therefore very effective.

Alcohol based hand rub is located on the end of your bed or just outside your door. It is most effective if the product is applied to the palm of one hand and then rubbed into both hands to cover all surfaces of the hands and fingers, until the hands are dry. This process usually takes about 15 seconds.

Alcohol based hand rubs don't work well when hands are visibly dirty. In this case washing hands with soap and water is essential.

How to clean hands with soap and water

Soap and running water are best for removing dirt and grease from hands. The steps are:

- Turn on the water and let it run over hands
- Apply soap
- Rub hands together to work up a lather
- Cover all surfaces of the hands with soap for at least 15 seconds. Rinse hands thoroughly
- Pat hands dry with a clean paper towel
- Dispose of towel in a waste bin.

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