# Table of Contents

ABSTRACT 5  
ACKNOWLEDGEMENTS 7  
CHAPTER ONE: INTRODUCTION AND BACKGROUND 8  
Background and Motivation 9  
Definition of Terms 10  
Project Relevance 11  
   *Workarounds and patient safety* 12  
   *Workarounds and the healthcare system* 14  
   *Workarounds and nurses* 16  
Research Questions 19  
Summary 19  
CHAPTER TWO: LITERATURE REVIEW 21  
Search and Retrieval Strategies for Literature Review 21  
Organizing the Literature 22  
Literature Review 24  
   *Defining workarounds and similar constructs* 24  
   *Blocks or obstacles* 27  
   *Proliferation of workarounds* 29  
   *Impact of workarounds* 30  
   *Nursing's relationship to workarounds* 32  
Study Purpose 33  
Summary 33
CHAPTER THREE: RESEARCH DESIGN, METHOD AND PROCEDURES

Interpretive Description Framework

Method Procedures

Sample

Data collection

Data analysis

Research ethics and considerations

Scientific quality

Summary

CHAPTER FOUR: RESULTS

Description of Sample and Workarounds

Theme 1: Nurse as Guardian

Theme 2: Weighing the Risks versus Benefit

Theme 3: Conscious Choices by Nurses to Use Workarounds

Theme 4: Emotional Turmoil Regarding the Use of Workarounds

Theme 5: Professional Relationships

General Insights Surrounding Workarounds

Summary

CHAPTER FIVE: DISCUSSION

Comparison to Literature

Theme 1: Nurse as guardian

Theme 2: Weighing the risks versus benefit

Theme 3: A conscious choice by the nurse to use a workaround
NURSES’ PERCEPTION OF WORKAROUND USE

Theme 4: Emotional turmoil regarding workaround use

Theme 5: Professional relationships

Limitations

Summary

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

Future Research

Implications

Conclusion

REFERENCES

APPENDICES

A: Literature Review Outline

B: Letter of Invitation

C: Consent

D: Demographic Sheet

E: Transcriptionist Confidentiality

F: Interview Guide

G: Trinity Western University Ethics Approval

H: Grande Prairie Regional College Ethics Approval

I: Expenses
NURSES’ PERCEPTION OF WORKAROUND USE

Abstract

Nurses work in environments that are complex, unique, ever evolving and full of systems designed to improve patient safety. Nurses are required to make snap judgements at times and to provide the best care possible to their patients and families. Workarounds are prevalent within the healthcare community, particularly in frontline care. However, it has only been recently that the study of workarounds and their impact has emerged within healthcare literature. There are various definitions of workarounds. The most generous definition, and the one used in this study, is “alternative, informally redesigned, and inconsistently applied work processes” (Halbesleben, Wakefield, & Wakefield, 2008, p.3). These alternative work processes appear within nurses’ work practice, but little is known about the impacts on nurses, the factors nurses consider, the impacts on patients, and the reasons for using workarounds.

This interpretive description study was designed to investigate how nurses perceive workarounds, what they think about before, during and after the process, and what patient, environmental, and personal factors they consider during a workaround. Seven participants, including both Registered Nurses and Licenced Practical Nurses, from the Peace Country region, Alberta, participated in interviews ranging from 45 to 90 minutes. Their expertise and areas of practice were diverse and included medicine and long-term care, as well as rural and pediatric. Interpretive description, a qualitative analytical approach, was used to analyze the interview data.

The following five themes were identified through qualitative analysis of the interviews: (a) nurse as guardian; (b) weighing the risks and benefits; (c) making a conscious choice to use a workaround; (d) the impact of emotional turmoil and upheaval on workaround decisions; and (e) professional relationships. Important implications to nursing practice include the value of nurses in creating frontline procedures, the responsibility of nurses to provide feedback to those in
NURSES’ PERCEPTION OF WORKAROUND USE

policy decision-making roles, the potential of current workarounds to produce practice based
evidence and the need for nurses to be aware of the emotional and mental health risks of
workaround use. Future research should focus on further defining workarounds as a construct of
relevance to nursing, the emotional/psychological impacts of workarounds on nurses, and the
extent to which professional relationships impact nurses’ use of workarounds.

Key Words: Nurse, workarounds, errors, mistakes, violations
Acknowledgements

Thank you to my advisors Dr. Rick Sawatzky and Dr. Darlaine Jantzen for their continual support, encouragement, and grounding common sense during this journey. Thank you, to my husband, Travis for patience and my mother, for the hours of endless childcare and support. Thank you to my colleagues and peers who helped in the recruitment of the participants for this study. Last, but most significantly, thank you to the nurses who offered their courage, time and commitment to this project.
Chapter One: Introduction and Background

Nurses are frequently challenged by working conditions within the healthcare system. Barriers to appropriate daily care of patients include missing medications, communication breakdowns, out-of-stock essential supplies, and broken equipment (Tucker, 2009). Nurses depend daily on their ingenuity and creativity to adapt to these barriers and to meet complex patient needs. At times, alternative work processes, in the form of workarounds, are used to circumvent the identified blocks. Zhou et al. state that “Workarounds occur when a routine is blocked by certain obstacles intentionally or unintentionally introduced, while the desired task could be reasonably achieved through bypassing the obstacle rather than directly addressing its cause” (2011, p. 3353). Healthcare is riddled with workarounds and healthcare professionals have been characterized as the “masters of workarounds” (Morath & Turnbull, 2005, as cited in Halbesleben & Rathert, 2008, p. 135). For whatever reason a workaround is implemented, its aim is to provide the care needed by patients.

Workarounds are problematic and difficult to study within the healthcare context. They are often deeply embedded in routine practice, only recognizable by other healthcare workers, and rarely acknowledged (Halbesleben et al., 2008; Lalley & Malloch, 2010). Vestal states that “nurses have turned the art of working around obstacles into a way of work life” (2008, p.8). McDonald agrees, echoing that nurses use workarounds as an attempt to periodically overcome perceived barriers by substituting the procedure with an alternative (2006). Despite the association nursing has with workarounds, little formal research has been done to understand the connection nurses have with workarounds (Halbesleben et al., 2008). Throughout this chapter I will discuss the origin of my thesis project, definition of important terms, purpose and remaining outline of this thesis.
Background and Motivation

For the last five years I have been teaching in a Bachelor of Science nursing program in Grande Prairie, Alberta. My primary clinical setting with students has been a medical floor that housed anything from cardiac and newly diagnosed patients with diabetes to those waiting for long-term care. The daily struggles of nurses to care for complex, rapidly-changing patients was evident to myself and even more so to the keen eyes of a third year nursing student. Eager to try new skills and to delve into clinical practice, students often shadowed other nurses. During post-conferences and seminars, variations to practice were often identified and discussed. Having practiced myself in this area and having seen, if not used, some of these variations myself, I was able to provide the rationale behind what I believed some of the nurses’ thoughts and goals were. At the same time, as both educator and nurse, I experienced the initiation of several processes and guidelines by Alberta Health Services (AHS) designed to improve patient care, reduce workload, and improve healthcare performances. A ‘culture of safety’ was encouraged in the workplace, and workaround/adverse event reporting was encouraged. However, since workarounds are often seen as contributing to good and efficient nursing care by nurses and management staff, they are typically not discussed. The implementation of Dashboard Safety Indicators as well a reporting system that allows individuals to report, without blame, hazards, close calls and adverse events brought discussion of both practices and literature from high-reliability organizations to the floor (Alberta Health Services [AHS], 2010).

During the past few years, AHS has utilized an educational program aimed at increasing staff nurse awareness of human factors, a culture of safety and incident reporting in a no blame environment to encourage the safety and proficiency the organization needed. AHS discussed the ‘normalization of deviance’ from a human factors view point describing that “errors arise when
the necessary processes for correct performance are incompletely specified… the mind’s response is very predictable. It defaults to a response that is frequent, familiar and appropriate for the context” (James Reason, 2008, as cited in AHS, 2009, p.6).

Following this education and considerable discussion with several clinical groups, I began to argue that far more consideration needed to be given to these practices than what is typically reflected in nursing literature. What about the nurses? Where in the literature are their thoughts, experiences, considerations and cognitive reasoning considered? In reviewing the literature, I discovered that the term workaround appeared in reference to nursing practice with some frequency, but rarely as viewed from the lens of nurses. This led me to question how workarounds are defined, how they impact nursing practice, and why workarounds are associated with other terms such as deviated normalization. After an exploration into workarounds as a construct, my questions about nurses and deviated normalization evolved into a more nursing specific view of alternative work processes or workarounds.

**Definition of Terms**

Many terms are used when speaking about workarounds. In fact the terminology for workarounds and similar constructs is so diffuse that researchers have spent time trying to delineate the different terms. In order to help provide context through the remainder of the thesis project, a list of definitions for important terms is provided below. A few definitions of related constructs are provided below. Further discussion about defining workarounds and like constructs is provided in the literature review chapter.

**Deviated Normalization.** Deviations from standard operating rules become, with repetitions, normalized in practice patterns (Banja, 2010, p.139).
NURSES’ PERCEPTION OF WORKAROUND USE

Error. Those occasions in which a planned sequence of mental or physical activities fails to achieve its intended outcome (Reason, 1990, p.9).

Healthcare system: The organization of people, institutions and resources that deliver healthcare services to meet the health needs of a specific population (Canadian – healthcare.org, n.d.).

Licensed Practical Nurse: “Professional nurses [who] work within their own scope of practice, standards of practice and code of ethics” (College of Licensed Practical Nurses of Alberta, 2015, para.3). They are involved in the assessment, planning, implementation and evaluation of nursing care.


Registered Nurse (RN): Self-regulated healthcare professionals who work autonomously and in collaboration with others. RNs enable individuals, families, groups, communities and populations to achieve their optimal level of health. RNs coordinate healthcare, deliver direct services and support clients in their self-care decisions and actions in situations of health, illness, injury and disability in all stages of life. RNs contribute to the healthcare system through their work in direct practice, education, administration, research and policy in a wide array of settings (Canadian Nurses Association, 2007).

Shortcut: “A process where time is perceived as a block, when workers believe that following the correct process will take too much time to suit their needs” (Halbesleben, Wakefield, & Wakefield, 2008, p.5).

Workaround: “Alternative, informally redesigned, and inconsistently applied work processes” (Halbesleben, Wakefield, & Wakefield, 2008, p.3).
Project Relevance

Workarounds have become a prevalent topic in healthcare during the last several years as new advanced technology and procedures designed to reduce errors have been widely adopted by healthcare organizations (Halbesleben et al., 2008). However, despite the increasing discussion of workarounds in literature, nurses have not been strangers to workarounds for years; in fact, some literature refers to workarounds as a nursing art (Vestal, 2008; Lalley & Malloch, 2010). Despite the influx of research on workaround practice, discussion of nurses’ experiences regarding their use of workarounds and the contexts of workarounds are missing in healthcare literature. Research has, for the most part, focused on understanding what defines or constitutes a workaround and on how using a workaround impacts the patient (Halbesleben, 2008; Halbesleben & Rathert, 2008; Halbesleben, 2010; Spear & Schmidhofer, 2005). Borrowing from other areas, such as sociology and ethics, researchers have implied the consequences of workarounds for the healthcare system and work processes (Banja, 2010; Vaughan, 2004; Reason, 2000).

A significant gap related to nurses’ experiences and considerations of workarounds remains in workaround literature. However, given that nurses are the largest component of frontline care and that they come face to face frequently with patient care challenges, they are in a position to provide insight into workarounds that cannot be gained from any other lens. Some research has begun to link workarounds to negative consequences, including nurses’ emotional exhaustion (Rathert, Williams, Lawrence, & Halbesleben, 2012). It is therefore important to investigate nurses’ perceptions of workarounds in their environment. The remainder of this chapter will discuss workarounds in relation to their impact on patients, the healthcare system and nurses.
Workarounds and patient safety. The healthcare system is a dynamic, difficult and evolving environment, and change is constantly required to maintain a functional healthcare environment. This system requires healthcare professionals to also adapt, creating an environment where workarounds are perceived as necessary and “a way of work life” (Vestal, 2008, p.8). Researchers are looking for a comprehensive understanding and prediction of the influence of workarounds on patient safety and some researchers hypothesize a complex connection between workarounds, adverse events and systems. Debono and peers state “workarounds simultaneously undermine and enable attempts to standardise healthcare quality and strategies” (2010, p.2). Many authors agree that it is difficult to quantify the consequences of workarounds, particularly for patients (Debono et al., 2013; Halbesleben & Rathert, 2008).

Relationships between workarounds and adverse events are extrapolated using information provided by authors like Baker and colleagues (2004) who note that up to 51 percent of adverse events (events that prolong hospital stays or result in disability at time of discharge or in death) could have been prevented. Reports similar to Baker’s have spurred healthcare organizations to implement instruments that reduce errors “by increasing the reliability of the patient care process” (Halbesleben et al., 2008, p. 2).

However, organizations have failed to consider that the implementation of many of these instruments may be introducing processes that are perceived as inefficient, unnecessary, inaccessible, inconvenient, and time consuming by professionals who are providing care (Beaudoin & Edgar, 2003). To get around these perceived barriers, healthcare professionals may use “alternative, informally redesigned, and inconsistently applied work processes” (Halbesleben et al., 2008). The implementation of error-reducing instruments did not create the workarounds,
as they were most likely already present in healthcare, but have rather opened up a field of study as the alternative work processes have been brought to the forefront.

It is difficult to directly measure the impact of workarounds on patients. Spear and Schmidhofer (2005) state that the more workarounds are used in practice, the more ambiguous and inconsistent policy and procedures become in the healthcare setting as intended safety features are bypassed, resulting in medical errors. In addition, Halbesleben and colleagues (2008) note that there is a solid link between workarounds and error due to unreliability. These observations imply that workarounds have the potential to compromise safeguards in healthcare that are designed to prevent medical errors (Halbesleben et al., 2008). Despite the abundance of hypotheses surrounding the impact of workarounds on patients, there has yet to be any research that definitively relates workarounds to poor outcomes.

Workarounds and the healthcare system. Workarounds in the healthcare system are not without complications. Workarounds, as a general rule, are viewed as first-order problem solving, meaning that while the identified block is bypassed, the reason for the block still generally exists (Halbesleben et al., 2008; Lalley & Malloch, 2010). Researchers argue that those who use workarounds rarely address the block itself or attempt to remedy it beyond the workaround (Debono, 2013; Halbesleben et al., 2008). A temporary solution is used, which implies that a permanent solution is needed (Vestal, 2008; Halbesleben et al., 2008; Lalley & Malloch, 2010). Consequently, the problem is transferred to another nurse or location, creating a cycle of workaround. The following example illustrates the ripple effect created by the workaround use. A nurse is providing medication to a patient and discovers a missing dose. The nurse then implements a workaround by borrowing the medication required from another patient’s medication drawer. This inadvertently transfers the problem to a different nurse at
another time. The borrowing of medications for one patient from another delays pharmacy’s ability to stock the ordered medication appropriately and may delay medication administration for the second patient. The intended use of the workaround was achieved, as the first patient received their dose. However the cycle perpetuates itself thereby potentially leading to the repeated use of the workaround.

Implementation of changes to workflow processes can cause workarounds within a healthcare institution and can lead to organizational instability (Rathert, Williams, Lawrence, & Halbesleben, 2012). Although these work processes and services are designed to assist in reducing barriers and blocks, the reality is that they often cause more problems. Systems are layered over already-existing processes, increasing rather than decreasing the probability of workarounds (Rathert, Williams, Lawrence, & Halbesleben, 2012). Multiple layers of overlapping safety procedures may lead to onerous amounts of paperwork and considerations before engaging in work, thereby increasing a nurse’s workload prior to touching a patient. Nurses are more apt to engage in the hands on work without engaging in the safety systems prior to starting physical care. Debono et al. state that “clinicians seem to implement workarounds as a way of responding to the complexity of care within a system that increasingly demands standardisation” (2013, p.2).

There is the risk of workarounds becoming repeated and routine in an organization. At times this may be a benefit, such as when the workaround is better than the procedure in use. For example, workarounds can be “localized acts of resilience, are crucial to the delivery of services and operate as adaptations to inefficiencies” (Debono et al., 2013, p.2). However, as aptly stated by Halbesleben (2008), “in the cases of intentional violations of safety procedures, such as the common practice of ignoring equipment alarms, routine behavior does not mean safer behavior”
NURSES’ PERCEPTION OF WORKAROUND USE

(p. 9). The presence of ‘sacred cows’ in nursing practice is well documented and the habitual practice of an unsafe practice is a concern when addressing workarounds within a specific culture. Thus, it is important for healthcare administrators to recognize both the potential benefits and harms that workarounds can have for system management.

**Workarounds and nurses.** Healthcare organizations and patients are not the only entities directly affected by workarounds. Nurses are also impacted. Although workarounds are present in most healthcare environments, recent research has demonstrated that the more frequently workarounds appear in practice, the more likely nurses are to suffer negative consequences (Halbesleben, 2008; Halbesleben & Rathert, 2008; Halbesleben, 2010; Spear & Schmidhofer, 2005). Healthcare practice and workaround relationships are cyclical. Nurses who are exhausted and experience fatigue during work are more likely to engage in the use of workarounds (Halbesleben & Rathert, 2008; Rathert, Williams, Lawrence, & Halbesleben, 2012). Conversely, the more workarounds are used in practice, the more likely it is that a nurse will experience exhaustion and fatigue (Rathert, Williams, Lawrence, & Halbesleben, 2012).

Occupational health injuries are also directly linked to the use of workarounds. Nurses who use workarounds in their practice are more likely to experience an occupational health injury. Halbesleben states, “Consistent engagement in safety workarounds will increase the opportunity for an injury to occur…leading to both a higher frequency and severity of occupational injuries” (2010, p. 2). Based on his research, Halbesleben concludes that “while exhaustion can lead to injuries (through workarounds), the experience of an injury can further limit resources, leading to higher exhaustion” (Halbesleben, 2010, p. 4). The interconnection between nursing practice and the negative potential of workarounds is evident. Therefore, it is imperative to understand how nurses experience workarounds to better understand the
NURSES’ PERCEPTION OF WORKAROUND USE

complexity of the relationship between workarounds and nursing, as well as the implications of workarounds for nurses.

Workarounds are of significant importance to nurses. It is almost as though the system and expectations of healthcare encourage nurses to engage in workarounds in order to get the work completed. Their environment, designed to comprise of “routine, highly organised, safe practices,” is laden with “unpredictable erratic hazardous demands,” and the system demands nurses be autonomous while also functioning in a rigorously structured system (Debono et al., 2013, p.2). This unpredictable environment is adapted by the nurse to each individual patient. Workarounds are used by nurses to provide the care needed in a manner that enables the individual patient focus. Finding the origin and placing responsibility for using a workaround is not as simple as pinpointing the nurse or the workaround during patient care. Workarounds are created out of a complex decision cycle, influenced by a multitude of factors and can create an aftermath that impacts many aspects.

Patients, nurses and healthcare systems are rarely impacted in isolation of one another. The following example provides a detailed description of the workaround process and its complex relationship with nurses, patients and the healthcare system. Morath (2011) describes a situation where a nurse caring for five patients created a workaround that allowed her to administer medications to patients without returning to a medication dispensing unit between each patient:

By placing the medications in a storage area, such as a uniform pocket, until needed the nurse can efficiently administer the specified medications to each patient without returning to the stationary device… This style of medication administration will continue in this manner, perhaps for a time with positive feedback for reducing overtime through
greater productivity, until the laws of probability are realized and there is a serious event due to a mix-up in medication. (p. 4)

This example demonstrates that some nurses perceive blockages within their practice setting that they identify as requiring a workaround. Potential positive benefits of the workaround include (a) increased productivity; (b) timely medication administration; (c) reduced process steps; and (d) increased probability of nurses receiving their breaks and completing their shifts on time and without overtime (Morath, 2011, p.6). However, there are also potentially detrimental consequences. For example, the migration of practice boundaries from an area of safety into an area of risk-prone practice could lead to increased incidences of near misses or more serious adverse events (Morath, 2011, p.6). In the above case, the workaround impacts the system by allowing the nurse to complete her job on time or to assist coworkers. The patient receives timely medication and the nurse receives breaks and completes work on time, thus feeling less fatigued. However, should the workaround not work as intended, the nurse, the healthcare system and the patient may be adversely affected.

A discussion is needed concerning the relationship between nurses and workarounds. As aptly pointed out by Morath (2011, p.2), “Nurses are the front lines of healthcare delivery, and as such, the front lines of safety and quality processes and outcome.” There is significant opportunity to change the system and environment, considering that nurses (Licensed Practical Nurses & Registered Nurses) are the largest healthcare workforce providing direct care (Health Canada, 2006). Nurses can assist with creating revised procedures that are less prone to workarounds and maintain safe practices (Wachter & Pronovost, 2009). However, before healthcare can benefit from nurses’ unique problem-solving abilities, it is important to
understand the complex relationship of nurses with workarounds, the consideration they give when choosing to use a workaround, and the perceived impact of workarounds on nurses.

Research Questions and Study Method

Due to the interlaid nature of nursing with workarounds and the potential impact workarounds have on both nurses and patients the importance of understanding nurses’ relationships with workarounds was revealed. The purpose of this research project is to explore nurses’ experiences with workarounds within their practice settings. The study aimed to address the following questions:

1. What factors does a nurse consider before choosing to implement a workaround?
2. What do nurses think about while choosing to use a workaround?
3. Are there any distinct work environment factors that influence their choices?
4. How do nurses feel about having to use a workaround in their practice?
5. How do workarounds impact a nurse’s work experience?

To answer the above research questions, the qualitative approach interpretive description was chosen. The interpretive description framework is an ideal method to assist with understanding the complex relationship between nursing and workarounds as it allows the researcher to provide “grounding of the conceptual linkages” within the data provided by the participants (Thorne, Reimer–Kirkham & O’ Flynn–Magee, 2004, p. 3). In addition, interpretive description encouraged an awareness of the long history workarounds have had within healthcare and nursing practice. The population sample consisted of both LPNs and RNs from diverse backgrounds of practice and years of experience. The semi-structured interviews discussed the nurses’ workaround stories in detail, focusing on the lived experience of their practice.
NURSES’ PERCEPTION OF WORKAROUND USE

Summary

Workarounds are involved in every aspect of healthcare. Workarounds are difficult to discern by individuals outside healthcare but provide nurses and other healthcare professionals with ways to “just get things done” (Vestal, 2008, p.8). However, as detailed above and explored in this thesis, there is far more to workarounds within healthcare and nursing practice than the nurse’s drive to complete a task. Through this research project a new perspective of workarounds through the lens of the nurse is described. This will assist current research and nursing practice to understand the considerations, thoughts, feelings and detail that nurses use when choosing to use a workaround. By extension, nursing practice and patient care can be influenced to provide optimal safe care.

This first chapter of the thesis discussed the background, relevance and workaround relationships with patient safety, nursing and the healthcare system. It also laid the ground work discussing definitions necessary to add context to the remainder of the thesis. The following chapter will consist of a literature review, including the overview and purpose as well as the relevant research discovered. Chapter Three covers the interpretive description framework, sample, data collection process, analysis, scientific quality and ethical considerations given during the thesis journey. Chapter Four presents the findings to the study including examples of workaround stories, the five themes uncovered during the analysis, and the general perceptions nurses have regarding workaround stories. Chapter Five provides the discussion of the results in relation to the literature and study limitations. Completing the thesis work is Chapter Six with suggestions for future research, implications for nursing practice and conclusion.
Chapter Two: Literature Review

In this chapter I briefly outline the search process I used to learn about workarounds and other related constructs. I describe how the literature differentiates between workarounds and other types of alternative work processes such as errors, rule violation and mistakes. The literature review began with the aim to create the scaffolding for an interpretive description study as outlined by Thorne (2008). During the initial brief search I performed when I became interested in the idea of workarounds, it was noticed that many terms were at times used interchangeably with workarounds. There were, however, several authors who contested that not all ‘alternative processes’ could be deemed the same. During the literature search I kept goals in mind that structured the content and information. It is important to note that some of the goals evolved later, particularly defining workarounds as a construct, as the literature search progressed. In particular, the literature review was guided by the following questions:

1. What defines a workaround? How does it differ from other terms?
2. What is nursing’s relationship to workarounds? How did it evolve?
3. What is the relationship between healthcare in general and workarounds?

Search and Retrieval Strategies for Literature Review

A literature review was performed to search for general information regarding workarounds, deviations, rule violations, shortcuts, errors, responsible subversions and mistakes. The purpose was to discern the definitional differences among these concepts, as often these concepts have been grouped together or mislabelled (Halbesleben, 2008). For example, workarounds are often associated with rule violation. These concepts have only recently been differentiated in healthcare literature. A more thorough discussion of what differentiates the various constructs will be covered later in this chapter.
Several databases and internet search engines were utilized for the search, done originally in September 2012, and updated in March 2015, including CINAHL, PubMed, MEDLINE, Sage, Google and Google Scholar. After a preliminary search using terms like workarounds, errors, habits, nursing and shortcuts, I expanded the terms to include other variations of similar constructs to develop a thorough review. Additional search terms included “culture of safety,” “event reporting,” “routine nonconformity,” “deviated normalization,” “preventable harm,” “deviations from standards of care,” “normalization of deviance,” “habits,” “rule violations,” “workflow hassles,” and “responsible subversion”. These results were then combined with “nurse” or “nursing” and “healthcare professional”. Boolean operators of “and” were used to focus the search by joining terms that referred to the same concept. No limiters were applied to the search. All articles were scanned via their abstract or full text for relevance to the topic and chosen accordingly. A further search of several studies’ reference lists was performed to expand the search capacity.

Organizing the literature

Inclusion criteria were broken into two sections: first, all articles were assigned to sections based on their description of the “alternative work process.” This allowed me to compare the variety of definitions that appeared with the literature within its own section. For example, I compiled all workaround related articles with a definition so the variances within each construct could be seen. This is what allowed me to thoroughly understand the nuances between the definitions and choose the language that was appropriate for my project. Several categories were created, including a category for workarounds, shortcuts, deviations, rule violation/rule bending and others (responsible subversion, rework avoidance). Once the articles were categorized, they were reviewed for definitions as well as for other attributes that identified
NURSES’ PERCEPTION OF WORKAROUND USE

the category (e.g., workarounds versus shortcuts). More detail on what separates and defines the different constructs is discussed later in this chapter.

As there was such a variety of definitions and keeping in mind the goal of the project, it was important to ensure the correct language and definition was used. There is a punitive and negative tone attached to many of the definitions (e.g., violation or shortcut), a consideration that was important when asking nurses to open up about their practice. After thorough consideration, the definition of workarounds was then identified as the construct that best represented this project. The literature was then separated into workarounds and all other constructs. The intention of this project is to begin to understand and discuss the relationship nurses have with workarounds in their practice. It was important to eliminate, by definition, those stories that were not true workaround stories. For example, a nurse may run into an isolation patient’s room to stop a beeping intravenous without donning personal protective equipment. By definition that could be both a workaround and a shortcut, as they are both an alternative work process with intent to benefit the patient. However, because this action primarily benefits the nurse, through time saving, it is seen as a shortcut first rather than a workaround.

Second, the inclusion criteria specified that the literature must pertain to the full range of healthcare professionals, including lab technologists and physiotherapists, to gain a broad description and understanding. References to other areas of study such as aviation and nuclear power were excluded; although they provided insight on the general topic, they added no additional knowledge to the nursing perspective.

All articles utilised for this project were written in English and taken from a variety of sources. Most were published research articles, but editorials, presentation material from symposiums and thesis papers were also included. Articles chosen were mainly from North
America, Europe and Australia. After reading these articles several times, I formulated four main groupings on the topic of workarounds. A representation of the literature review can be seen in Appendix A. I discuss the following in relation to the literature: defining workarounds and similar constructs; perceived blocks; workarounds and safety; and the relationship of nurses to workarounds.

**Literature Review**

Below is an overview of the literature in regards to how workarounds are discussed and relate to nursing and the construct of workarounds in general. I began with seeking to better understand what a workaround is in general and how it has evolved in literature. Most of the discussion surrounding defining workarounds and similar constructs is opinion related and driven from the particular background and expertise of the author, such as healthcare or sociology. Nonetheless it is important to understand the foundation of workarounds. Blocks and obstacles are discussed following defining workarounds and similar constructs. Blocks are considered to be the foundation of why a workaround exists and describes the types of barriers perceived by those using workarounds. Following is a discussion of how workarounds continue to exist in a healthcare system, the impact of workarounds and nurses’ relationship to workarounds.

**Defining workarounds and similar constructs.** Differentiating workarounds from other constructs is an important beginning. As so many terms are being used interchangeably, it became necessary to generate a singular definition to provide the researcher, participants and readers with clarity. Second, it was also important to ensure that the stories discussed and reviewed for analysis were about workarounds and that other forms of alternative practices such as shortcuts were eliminated. In some cases, the definitions are so similar that it is like splitting
hairs to identify their differences, and in some cases the nurses’ stories could fall under more than one category. Last, even though definitions of workarounds were not always directly related to nursing, those that were represented a large portion of workaround literature and began to provide the scaffold of understanding, which Thorne (2008) describes as needed for an interpretive description approach.

A significant knowledge base related to workarounds in non-healthcare professions exists within the research literature that defines workarounds or workaround-like behaviours. Alternative terms such as deviated normalization (ethics and sociology) occur with some frequency, particularly in the areas of aviation and nuclear power (Banja, 2010; Vaughan, 2004; Reason, 2000). In the last ten years, healthcare literature, aside from editorial pieces, has begun to focus on workarounds (Banja, 2009; Reason, 2000; Rathert et al., 2012; Halbesleben, 2008). As it is difficult for healthcare workarounds to be defined and compared with those in other professions, and vice versa, there has been considerable work done on defining workarounds in the contexts of healthcare. Defining workarounds separately from other forms of altered work processes has predominantly focused on describing the practitioner’s motivation and intent for using an alternative process (Halbesleben et al., 2008; Lalley & Malloch, 2010; Vestal, 2008; Tucker, 2009).

When a researcher is differentiating these constructs, it is difficult to discern why one alternative work process would be called a workaround and another, a deviation. Significant debate about a solid definition of a workaround still exists, and often in editorial pieces the definition is altered to suit the author’s perspective. Halbesleben et al. (2008) state, “a challenge of the existing literature is that many of the elements of the definitions have not been elucidated, for example, all of the definitions include mention of an impediment in workflow” (p.4).
Although some definitions are quite simple, such as “informal … practices for handling exceptions to normal workflow” (Kobayashi, Fussell, Xiao, & Seagull, 2005, p. 1561), more robust definitions support the ingenuity of a workaround. Lalley and Malloch (2010) propose that a “workaround is a creative, redesigned process that facilitates patient care by providing opportunities for nurses, designers, regulators, and administrators to interact and produce novel patterns or knowledge” (p.31). This definition epitomizes nursing workaround literature since it illustrates the pride nurses take in their ability to problem solve and creatively think in practice. Other authors claim that “nurses have turned the art of working around obstacles into a way of work life” (Vestal, 2008, p.8). Below are the distinctions between the alternative work processes identified during the literature review.

Despite the various definitions, it is still difficult to understand how a workaround is different from a violation or shortcut. The literature articulates that a rule violation could be a workaround, but also that a workaround might not be a rule violation. Although alternative work processes have been described as errors, literature from the last four years delineates that errors are the consequence of utilizing a workaround and do not refer to the process itself (Halbesleben, 2008; Lalley & Malloch, 2010). Shortcuts may also constitute workarounds. However, some workarounds take longer than the original procedure and are therefore not shortcuts (Vestal, 2008). The last distinction made in the literature is between deviance and workarounds. A deviance is motivated by things other than providing optimal patient care. Consider two nurses who use the same alternative work process. One nurse does so hoping to provide better care to a patient while the other hopes to leave work early. The first alternative work process would be considered a workaround, whereas the second would be considered a deviation (Banja, 2010; Halbesleben, 2008; Lalley & Malloch, 2010). It is therefore very difficult to discern one
NURSES’ PERCEPTION OF WORKAROUND USE

construct from the other unless there is in-depth dialogue with nurses about the factors that influence use of workarounds.

**Blocks or obstacles.** Regardless of the workaround definition or work process description, one thing is clear: workarounds do not exist without a block or obstacle that drives the individual to use a workaround. These blocks may be perceived by everyone involved or may be only identifiable by the person using the workaround. Blocks can be intentional, such as the double checking of medication dosages with another practitioner (e.g., an intended safety block), or unintentional, such as a poorly designed workspace (Halbesleben, 2008; Halbesleben & Rathert, 2008). Nursing literature further categorizes blocks based on elements such as organisational factors (staffing levels, fluctuating workloads, heavy workload, productivity pressures), work process factors (new technology, policies, resource issues, incorrect equipment), patient-related factors (timely appropriate care), individual clinician factors (practitioner fatigue, cognitive load, unfamiliarity of procedures) and social and professional factors (poor communication, nurse-physician relationship) (Debono et al., 2013).

Organisational factors are the most common site triggers for workarounds by nurses (Halbesleben, 2008; Debono et al., 2013). Nurses considered poor staffing, heavy workloads and pressure to complete tasks quickly as motivators, in addition to patient-related factors. Additionally, working in an environment that was perceived to be a negative organizational culture with “poor leadership, a lack of involvement of nurses in decision making, few opportunities for professional development and a lack of perceived human management resources” contributed widely to the proliferation of workarounds (Debano et al., 2013, p.7).

Similarly, work process factors contribute to workaround use by failing to ensure an appropriate work environment. Issues such as inappropriate equipment, failure to stock equipment, poor
resources, missing medications and the layering of new technology and procedure with older technology were cited as reasons for nurses to use workaround (Debano et al., 2013; Halbesleben 2008; Westphal, Lancaster & Park, 2014). From an individual nursing perspective, clinicians themselves may contribute to workarounds because of being fatigued, having a high cognitive workload, being unfamiliar with practices such as technology, or perceiving that a policy or procedure is not important (Debano et al., 2013; Halbesleben 2008; Westphal, Lancaster, & Park, 2014).

Likewise, nurses also contribute from a personal perspective. Wanting to deliver quality timely care to patients drives the use of workarounds. However, changes to acuity, and individual patient needs that are not suited for the system as a whole contribute to workaround use (Debano et al., 2013; Halbesleben 2008; Westphal, Lancaster & Park, 2014). Overarching all identified blocks is the individual’s perception of the block itself. That is, ‘does the individual providing care perceive a block’? Perception of a block may be the start of a workaround but researchers suggest that organizational climate and culture with peer and coworkers’ beliefs about workarounds contribute greatly to the inception and continuation of workaround use and block perception (Halbesleben et al., 2008).

**Proliferation of workarounds.** Workarounds are, at times, ingrained into nursing practice or are created out of the ingenuity of the practitioner him or herself. However the workaround initiates, employees need to both know about the workaround and be willing to use it in practice (Debano et al., 2013). Kobayashi et al. state that “a workaround cannot be effective if the persons involved are not able or willing to perform. Initiators of workarounds take their tacit knowledge of others’ skills and abilities into account when deciding how to implement workarounds” (2005, p. 1563). In some cases, workarounds are already present in routine
nursing practice, such as the habitual alteration of a practice by one particular group as taught by senior staff to junior staff, leading to the proliferation of the workaround despite education and appropriate materials (Morath, 2011). One example is the removal of the glove fingertip when a nurse inserts an intravenous line. Nurses are better able to feel the vein, are less likely to poke the patient more than once, and perceive little risk, as the non-dominant hand wearing this glove is away from the injection site. This taught behaviour continues until stopped by management or until a serious consequence occurs (Campbell, 2011; Banja, 2011). This type of practice becomes a “sacred cow” and proliferates through the workplace (Beaulieu & Freeman, 2009).

Poorly performing work systems are another reason why workarounds continue to multiply within the healthcare system. Tucker states that nurses experience ‘operational failures’ such as broken equipment, faulty medication doses, missing supplies or lost keys at a rate of one per hour (2009). In 2004, a study conducted by Tucker discovered that at least 33 minutes of a nurse’s 7.5-hour shift are spent problem solving and dealing with operational failure. She suggests that this time not only takes away from valuable patient care but also contributes to additional nursing workload, and increases in patient mortality and staff burnout (Tucker, 2004). Researchers argue that the “true magnitude of work system problems remain hidden because healthcare professionals are so good at working around them” (Tucker, 2010, para 3; Vestal, 2008).

Several factors specific to nurses enable the proliferation of workarounds. Firstly, nurses are coined the masters of workarounds. Nurses possess a unique combination of skills and lack of clarity in their scope of practice enabling workaround use. Expectation to be autonomous, but follow strict policies, opens the nursing practice up to the use of workarounds. Secondly, a nurse’s workplace demands efficiency, an expectation to be a problem solver, autonomy but with
lack of role clarity (Debono et al., 2013). With the healthcare system continually placing these demands on nurses, workarounds will continue to proliferate as practitioners attempt to balance patient care, nurse competence and work expectations (Debano et al., 2013; Vestal, 2008; Westphal, Lancaster, & Park, 2014). Some research has also noted that nurses use workarounds as a way to save face. They may ask those closest to them for help rather than those appropriately equipped, thus covering up lack of knowledge while attempting to ensure that their share of the workload is completed (Debano et al., 2013; Westphal, Lancaster, & Park, 2014; Vestal, 2008). As long as these challenging conditions exist, workarounds will continue to proliferate.

Impact of workarounds. Workarounds are embraced by practitioners for their ingenuity and ability to provide the end result, and at times make work more manageable and timely. The dark side to workarounds is the potential and likelihood of adverse consequences to occur. A large portion of current research on workarounds has been driven by safety concerns. However, most researchers hypothesize the impact of workarounds and offer three areas of negative impact: (a) errors and decrease in patient safety; (b) transference of one problem to another person or location; (c) increase in nurse/worker burnout. Workarounds are highly documented as prevalent in the following areas: medication administration, bypassing of technology such as barcode systems or physician order entries, donning and doffing of infection-control protective equipment, washing of hands, use of abbreviations, and lack of required approval such as a doctor’s order prior to starting a procedure (Banja 2009; Halbesleben et al., 2008; Tucker & Spear, 2006). Tucker states that the use of these workarounds contributes to patient mortality and nurse burnout (2004). Banja similarly argues that some “patient care disasters” due to workarounds used in practice are akin to mega disasters such as Chernobyl or the explosion of
the space shuttle Challenger (2009, p.139). Workarounds are viewed as causing preventable errors and patient harm (Halbesleben et al., 2008; Banja, 2009; Tucker & Spear, 2006). Moreover, the use of workarounds often requires only first-order problem solving, meaning that while the immediate problem is solved, the need for the workaround is not removed. Hence, the workaround is used again and again, increasing the chance of error (Tucker, 2010).

In the case of transferring the problem from one site to another, nurses are ingenious and combat problems in many different ways. Stockpiling medication, equipment and supplies is one of the many ways nurses work around system failures. However, stockpiling in one place causes shortages in another (Vestal, 2008; Tucker, 2009). Last, nurses’ constant use of workarounds has been linked to physical injury and burnout. Emotional exhaustion and a high turnover rate have been associated with the continuous use of workarounds in the practice setting (Rathert et al., 2012; Wheeler, Halbesleben & Harris, 2012). Moreover, the use of workarounds in safety procedures such as lifting and transferring patients can lead to higher incidences of occupational injury (Halbesleben, 2010).

Nursing’s relationship to workarounds. Discussion involving nursing and workarounds has primarily come from either an opinions perspective or patient safety concern. Technology including barcode medication administration and computerized charting are the most researched bypassed systems by nurses (Debono et al., 2013; Halbesleben, 2008). No research has been conducted from the viewpoint of the nurses using the workarounds as to what factors or concerns a nurse considers when deciding to use a workaround in practice. More significantly, substantial conversation has not yet occurred about how nurses identify with, understand, utilize, and are impacted by workarounds in practice. More recently, researchers have begun to identify the
NURSES' PERCEPTION OF WORKAROUND USE

factors that are understood to precipitate workarounds, but a gap in general understanding of workarounds and nurses continues to exist.

Multiple authors agree that workarounds can have the potential to improve a process and produce a better outcome than the established procedure. Thus, there is a need to evaluate the ability of workarounds to be utilized universally to improve patient care outcomes (Halbesleben et al., 2008). There is an equal need to understand the consequences that can occur with workaround use. These steps are not possible without understanding the vast and substantial consideration, impact and consequences of workaround use as seen through the eyes of individual nurses who use workarounds. Nurses have a critical role in patient care. Their innate ability to determine both core problems and subsequent problems provides nurses with unique understanding and insight about workarounds (Henriksen, Dayton, Keyes, Carayon, & Hughes, 2008).

Study Purpose

As discussed in the background section, it became obvious during the literature review that although nurses were considered as a source of workarounds use in healthcare, they were rarely able to provide information on why the workaround was used. Most authors collected data in the form of a survey that allowed only a finite number of answers as well as limited the amount of understanding surrounding the rationale that could be gleaned from their choice. Although these survey help to explicate reasons for using workarounds, they do little to delve into the nuances and complex considerations underlying workaround decisions. To properly explore and identify the relationship between nurses and workarounds, it is necessary to understand what nurses, think, feel and experience during the workaround situation. Ample discussion, back and forth surrounding the situation, beliefs, thoughts and feels is necessary.
NURSES' PERCEPTION OF WORKAROUND USE

Nurses need to be interviewed in a confidential interactive basis to understand the extent of the thought and consideration to the decision as well as to understand the impact and interaction workarounds have with nurses in their practice. Nurses are, as discussed by researchers, putting themselves at risk when using a workaround both physically through occupational injury and emotionally through decreased psychological safety and emotional exhaustion at work (Wheeler, Halbesleben & Harris, 2012; Halbesleben & Rathert, 2008; Rathert, et al., 2012; Halbesleben, 2010). Investigation is currently lacking in understanding why nurses take the risks listed above on themselves and what consideration is given to their own risk. Moreover, as workarounds are often associated with adverse events and errors for patients, it is important to understand why a nurse would consider taking the risk of using the workaround.

The purpose of this study is to have nurses relate their workaround experience in detail discussing the factors, thoughts, feelings/ emotions and impact experienced. In order to fully understand the nursing workaround experience, an in depth discussion of the workaround is needed. Within the next chapter I will outline the research design, method and procedures used to investigate how workarounds are influencing nurses and nursing practice.

Summary

Workarounds are a relatively new subject in research literature despite having been prominent within the healthcare setting for many years. While workarounds remain prolific within healthcare, little is known or understood about nursing practice and the use of workarounds. Most literature is split into two categories, one that involves researching workarounds from a safety perspective and discusses bypasses to technology or safety procedures and another that involves editorial pieces about the ingenuity, prevalence and capacity of workarounds in healthcare. More formally, the definitions of workarounds have been
NURSES’ PERCEPTION OF WORKAROUND USE

identified as being difficult but necessary to define as there are many similar constructs. Workarounds have been distinguished from similar constructs such as deviations, shortcuts and violations. Researchers offer a variety of definitions, each with its own spin but encompassing similar traits as other definitions. This project utilized the definition supplied by Halbesleben and colleagues in 2008: “alternative, informally redesigned, and inconsistently applied work process” (p.3).

Workarounds emerge out of practitioners’ perception of the need for care to be delivered in a timely and appropriate fashion as well as their perceptions that blocks exist. Defining and addressing the most commonly identified blocks are common in literature. These blocks are organized into general categories such as organizational factors, work process factors, patient-related factors, individual clinician factors, and social or professional factors (Debono et al., 2013). These blocks have also been referred to as motivators or rationales behind workaround use. However, these identified factors/ blocks/ motivators are not as simple as researchers illustrate them to be. Nurses, patients, and even healthcare systems, are all impacted by the use of workarounds.
Chapter three: Research Design, Method and Procedures

The purpose of this research project is to explore nurses` experiences with workarounds within their practice settings. The study aimed to address these questions:

1. What factors does a nurse consider before choosing to implement a workaround?
2. What do nurses think about while choosing to use a workaround?
3. Are there any distinct work environment factors that influence their choices?
4. How do nurses feel about having to use a workaround in their practice?
5. Do workarounds impact a nurse’s work experience?

This section provides a description of how an interpretive description research framework was used to generate answers and knowledge related to the above research questions. It begins by discussing the interpretive description approach and its application to the research questions at hand, followed by a description of the research methods used, including sampling, data collection, and data analysis procedures, and concludes with ethical considerations.

Interpretive Description Approach

Drawing on the foundational strengths of traditional qualitative research methods, including grounded theory, phenomenology, and ethnography, interpretive description provides a “kind of inquiry… about describing interpretively what the researcher learns and understands about the meaning of practice situations” (St George, 2010, p. 1625). A qualitative method, particularly a general approach like interpretive description, will provide a portrayal of workarounds that is full of personal insights and stories (Thorne, 2008). This method is designed to respect and recognize individual stories as well as the commonalities that exist within the data collected, focusing on shared experiential knowledge (Thorne, 2008). An open inductive method assisted me to describe the complex interactions that occur within workarounds and to create a foundation that supports mapping the connections between nursing practice, influencing factors,
impacts and workarounds. A benefit of interpretive description is the researcher’s ability to build a segmented analysis, choosing the collection, sampling and analysis methods that best suit the research and researcher (Thorne, 2008). Utilizing nurse volunteers to describe their experiences in-depth will provide rich data for analysis. Lastly, the orientation of interpretive description towards clinical practice and the application-oriented possibilities for nursing are central to the goals of my inquiry.

To begin interpretive description research, the researcher must first create a scaffold or design plan. A thorough literature review to define the current knowledge base and to assist with drawing conclusions about what is known about the research problem is the first step in creating a study scaffold (Thorne, 2008). The literature review was the beginning of my research, allowing me to identify potential problems, concerns, and preconceived ideas about the topic prior to collecting data. While using interpretive description, the researcher and data are intertwined and connected. It is important to openly identify the researcher’s biases and opinions before entering into the study. Thus, I used reflective notes to make visible the evolution of my decision process as well as any underlying beliefs and assumptions existing before data collection and throughout the process (Thorne et al., 2004; Hunt, 2009).

**Method Procedures**

**Sample.** The population relevant to the study is nurses practicing in Alberta, Canada, from a variety of settings. Both convenience and snowball sampling were used to recruit nurses practicing in both hospital and community environments within Alberta. Recruitment envelopes containing a letter of invitation (Appendix B) as well as consent forms (Appendix C) were given to nursing instructors at Grande Prairie Regional College (GPRC) to distribute to individuals they identified as applicable to the study. The thirty nursing instructors at GPRC who practice in
a wide variety of settings and locations increased the likelihood of recruiting the required number
of participants in different practice settings. Instructors at GPRC reported that they distributed
recruitment envelopes to individuals across the Peace Country; most were distributed in Grande
Prairie, but some were distributed to rural communities as far as six hours north of Grande
Prairie. Nurses who agreed to participate in the study needed to be practicing or to have practiced
very recently in a healthcare setting as either a Registered Nurse (RN) or a
Licensed Practical Nurse (LPN). Further inclusion and exclusion criteria for the study were that
participants needed to be English speaking and willing to share detailed stories about their
practice choices. In addition, participants needed to be available by phone, Skype or, preferably,
in person.

The GPRC instructors distributed ninety-five letters within their professional networks.
These potential participants could have been the instructor’s friends, co-workers, former
employers or former students. Each participant contacted the researcher by phone after receiving
the letter of invitation to express interest in the study. At this time participants were also invited
to mention the study to anyone they knew who might be interested in participating. After
discussion with potential participants to answer their questions as well as to ensure their ability
and willingness to reflect on and report workaround incidents they had knowingly engaged in, I
invited them to participate in the study.

At least six participants were desired to obtain a variety of stories, workarounds and
settings so that the topic of workaround use could be fully explored. In order to be pragmatic
about the realities of a thesis project, no more than eight interviews could be considered; this
number would allow for a full complement of stories but still allow the project to be a feasible
master’s study. The final number of participants was decided upon once a variety of stories had
been obtained from both RNs and LPNs and rich enough data obtained to answer the research questions. I recognized that a variety of participants from many different settings and with diverse rationales, experiences, thoughts and feelings were needed.

Seven nurses were invited to participate in the study, with 17 nurses in total expressing interest in participating in the research project. Beyond the seven nurses who were interviewed, others from a variety of settings, including rural sites, operating rooms, and public health also expressed an interest. Due to some of the interested nurses’ lack of timely availability, the time constraints of the researcher, and the twenty-three diverse stories from seven participants already collected, I determined that enough data had been collected to identify themes and similarities within the data to fit the constraints of a thesis project. Contact information from additional potential participants was obtained, however, so that if more questions arose during data analysis, additional interviews could be included.

To provide a description of the nurse participants and to assist with potential transferability of the study to other potential researchers (Polit & Beck, 2008), a summary of the demographic data follows. The demographics were obtained utilizing a customized demographic form (Appendix D) after the consent form had been signed at the beginning of the interview. Of the seven nurses who participated in the study, three were LPNs and four were RNs. Four nurses were currently practicing full time in healthcare, while three had recently decreased their practice hours to 80% of full time. All nurses interviewed were practicing in Grande Prairie and were between the ages of 23 and 34. The nurses’ experiences ranged from three to thirteen years; they discussed practice settings that included a medical telemetry unit, pediatrics, long-term care, emergency room, and a rural and addictions. The participants were all female and spoke English. Six of the seven participants were Caucasian, one participant identified herself as First Nations,
and all participants identified themselves as Canadian. All of the RNs had degrees, and were either Bachelor of Nursing or Bachelor of Science in Nursing graduates. All four RNs had additional education related to their current area of practice, such as training in Advanced Cardiac Life Support, Trauma Nurse Care, or Counselling for Addictions and Mental Health. The LPNs each had different levels of education as each participant had been trained in a different province; their programs ran from twelve months to two years. The LPNs had varying degrees of further education provided by their employer to develop the competencies need for advanced scopes, such as central venous catheter management and medication administration courses.

The use of snowball sampling and convenience sampling (Polit & Beck, 2008) raises some concerns about sampling bias. While it was possible the sample could have been homogeneous and non-varied, I believed that by utilizing both types of sampling, I would find a diverse population for the region the participants resided in. The participants ranged in years of age and experience, and they worked in diverse locations. The association with the participants was acknowledged, as all of the participants are known to the researcher as colleague, acquaintance or friend.

**Data collection.** Original data were collected as needed for an interpretive description study. Self-reporting occurred in the form of a demographic form and recorded interviews (Polit & Beck, 2008; Thorne, 2008). The relevancy and accuracy of self-reporting are potential weaknesses in this study and are explored further in the discussion chapter. As nurses’ stories of workarounds involved divulging intentional breaks in practice, I had some concern about using self-reporting as opposed to observation during practice. However, to get rich details about nurses’ thoughts and experiences, self-reporting was necessary.
NURSES’ PERCEPTION OF WORKAROUND USE

Research data was collected in a variety of ways to accommodate participants’ preferences in location and other unpredictable variables, such as the weather. Interviews were conducted either face to face (participants’ homes or small classrooms at GPRC), or by Skype or telephone. During the interview, consent was obtained and each participant was asked to complete a demographic form. Skype and telephone participants returned a completed consent form via mail prior to their interview. The interviews varied in length from 45 to 90 minutes and were audio recorded.

The audio recordings were transcribed by a transcriptionist who had signed a confidentiality agreement (Appendix E). I proofed the audio recordings while reading the transcripts to ensure accuracy and to listen to the tone/spirit of the participant. The interviews were semi structured and the researcher utilized an interview guide (Appendix F). Grounded in interpretive description, the interview questions were formulated using research literature and expert clinical knowledge (Hunt, 2009). After the interviews, I completed field notes to encourage thorough reflection and to further enrich the interview data. I also used journaling to facilitate self-reflection during data analysis, as the interviews were often intense and very emotional. At the end of each interview, participants were debriefed if needed through general discussion. Three participants required debriefing as they were still emotional at the end of the interview.

I did encounter equipment failure during interview two, which was only partially recorded. One entire workaround scenario was utilized including reflexive notes and field notes. The remaining field notes and reflexive notes were kept but not formally coded as part of the research data, since there was no corresponding audio data. However, the field notes and reflexive notes did contribute to the interpretation of the data throughout the analysis.
NURSES' PERCEPTION OF WORKAROUND USE

In appreciation of their time and effort, each participant was later mailed a thank you card and a coffee gift card of ten dollars in value. Participants willingly provided their mailing address as part of the demographic sheet during the interview so that they could receive the thank you card.

Originally, I had anticipated conducting follow-up interviews due to the complexity of the subject and the detailed nature of the stories. However, after cursory data analysis, I determine that the data was rich enough to not require follow-up interviews. In order to remain true to the data and ensure that I had adequately represented the participant’s intention, I referenced field notes and did reflexive journaling to clarify any questions that emerged.

Data analysis. Data analysis in interpretive description is very fluid and flexible. The ultimate goal of interpretive description is to produce “clinical knowledge pertaining to clinical nursing contexts” that fits the “complex experiential questions” asked (Thorne, Reimer-Kirkham, O’Flynn-Magee, 2004, p. 2). As the intention of this research was to delve into and begin to experience the complex relationship between workarounds and nursing practice, the interpretive description framework provided the perfect medium for experiencing firsthand knowledge and experience while also providing results and discussion that could influence nursing practice.

The beginning of the research process, as detailed by Thorne (2008), enlists the researcher to first understand the preliminary and blatant concepts that emerge from preliminary coding, then to accept and move past the surface layer of results to the complex interwoven themes that emerge. I found this difficult in the beginning, as the interview questions derived from the literature review scaffolding helped to unveil the surface data and readily answered the questions about the factors. The factors described by the nurses were prevalent and obvious, reinforcing my original perception of why the nurses engaged in the workarounds. However,
after re-grounding myself in interpretive description as well as reengaging in the data as a whole, I was able to move past the surface layer to reveal the meaningful and expressive themes underneath.

Additionally, as Thorne suggests (2008), it was difficult for me to remove my clinical self from the interviews. During the interviews, I had difficulty playing the role of ‘someone who does not know,’ as I could relate to the scenarios, thoughts, feelings and actions of the nurse. However, by letting the interviewee lead, I found that the nurses’ stories took on a life of their own and revealed potent information capable of producing results. Reflexive notes and constant reorientation during the interview were necessary to ensure that I was engaged in my new role of researcher rather than that of nurse or colleague. During analysis, I referred to and consulted these notes to ensure my perceptions were not imposed on the interview. Thorne notes that “documenting something of what is happening to you subjectively and conceptually within the research engagement becomes a core element informing your inductive analytic process” (2008, p.109).

Thorne (2008) describes a wide range of choices for a qualitative researcher to utilize during the analytic process. I chose a general approach to thematic analysis for the process of coding and data analysis. The process is not linear but a rigorous cycle that involved constantly reorienting in the data. Challenging the themes that emerged through the coding and early thematic analysis allowed for a conclusion of meaningful results. Thorne’s description of how to ‘make sense of the data’ provides a structure and framework to help the novice researcher organize, understand and synthesize the data (2008). Hunt describes the steps of the analytic process as including “constant comparative techniques, iterative analysis, and reciprocal approaches to data making and analysis” (2009, p. 1288). This fluid method allows for the
researcher to become immersed in the data and to constantly sort through and compare the emerging themes. Being able to shift between analysis, immersion and collection was integral for my analysis and informed the remaining interviews.

The iterative analytical approach allows for the researcher to layer the meaningful data as it appears while searching for similarities, outliers, and emerging themes. This approach has been described as “visiting and revisiting the data and connecting them with emerging insights, progressively leading to refined focus and understandings” (Srivastava & Hopwood, 2009, p. 77). Variations of the three questions defined by Sirvastava and Hopwood (2009) assisted me with sorting, conceptualizing and organizing the themes as they emerged: What is the data telling me? What do I want to know? What is the relationship between what I want to know and what the data is telling me? As themes began to emerge the process began again, as I returned the themes to the data for repeated analysis. This process also allowed me to revise my initial research questions as I realized that the data revealed important information that did not directly address the original research questions, which were constructed based on the literature review scaffold. In particular, adding to the issues of the original questions, the issue of the impact of workarounds on nurses was also considered. The abundance of references and blatant emotional responses to workaround scenarios moved the project towards a subject that had yet to be seriously considered in the research, emotional burden and consequence of workaround use.

I spent time immersed in the data, checking the accuracy of the transcription as well as ensuring that the intention of the interviewee was captured. I listened to the recordings while simultaneously reading the data two to five times, depending on the complexity of the conversation and the interviewee’s cadence. After I was sure that the transcribed data accurately represented the recordings, initial, detailed coding began. However, after I had worked through
two interviews, there was already a large number of codes as I could not “conceive of the intellectual chaos that inductive reasoning inevitably represents in the liminal space between the preliminary framework and the eventual structural decisions” (Thorne, Reimer-Kirkham & O’Flynn-Magee, 2004, p.10). Prompted by my committee members, I returned to Thorne (2008) and began coding again, attempting to “not be derailed by excessive precision in [my] early coding” (p. 145). The preliminary codes were motivation/process or assessment, awareness of broken rules/ recognition the workaround was not an optimal choice, identified blocks, validation, feelings and values, resolution and the consequences for the nurse/family/patient.

Coding continued after the remaining interviews were transcribed and during the data collection process. After the initial codebook was developed and the data “fractured” with concepts kept generic as broad-based categories that originated from the data were assigned, I set aside the codebook (Thorne et al., 2004) in an attempt to let go of the preconceived notions that the literature and I, as the researcher, held about what the data would reveal. In keeping with the suggestion by Thorne, Reimer-Kirkham, and O’ Flynn-Magee (2004), I wanted to truly represent the data and make useful conceptualizations rather than make the data ‘fit’ the previous research. A cyclical pattern of using the three questions detailed above began my process of synthesising, layering and conceptualizing, helping me move past the surface to more deeply understand the data. As the analysis progressed, conceptually related codes were condensed, grouped, and defined accordingly (Steubert-Speziale & Rinaldi-Carpenter, 2007).

As the themes evolved, an interconnected web of the relationship between workarounds, nurses and patients began to appear. It became clearer that nurses were not simply using workarounds because of personal desire or lack of equipment. Rather, a multifactorial interactive cognitive and emotional process occurred for the nurses that affected them in ways that had yet
to be explored. Grouping, regrouping and defining the boundaries of the preliminary themes assisted me with moving forward to reduce the number of themes and to begin looking at the origin and boundaries of each theme. Asking the questions, “What is going here?” and “What is the nurse trying to tell me?” helped to remove my preconceived boundaries and identify the root intentions of the nurses (Hunt, 2009, p. 1286). My ideal of identifying the numerous factors nurses consider when using a workaround became too superficial and the factors too numerous to consider. I created lists of both workplace factors and patient factors, but found myself asking, are these the only reasons for using a workaround? When I removed the boundaries, challenged preconceived notions, and searched for the roots of the existing themes, more relevant concepts began to emerge. The themes that emerged were a consideration of risks versus benefits, emotional psychological distress, the workaround situation and physicians’ contributions to nurses’ use of workarounds.

My aim was to arrive at conclusions “that will powerfully capture the important elements” of the nurses’ experiences of the workaround phenomenon progressed by layering the data, and challenging the ideals of each theme (Thorne, 2008, p. 169). In order to ensure “a disciplined consideration of a range of possibilities before interpretive conclusions,” each theme and description was refined by considered considering the above three questions at each stage in the analysis (Thorne, Kirkham-Reimer, & O’Flynn-Magee, 2004, p. 13). At each stage, I considered the reflexive notes and field notes to keep me interactive with my observations during the interviews as well as to consider elements that might not show up on transcribed data, such as emotions and reactions to the scenario. It became particularly important to this study for me to frequently listen to the recordings during the process. The participants’ discussions were full of emotion, conviction and confidence that were lost in the transcription process. I found it often
necessary to create reflexive notes, even small paragraphs, after listening to recordings for the third or fourth time as the participants’ comments evoked an emotional response in me. For some of the scenarios, it was very difficult to distance myself emotionally; I often felt angry, heartbroken, or sad along with the participant. During one interview, I cried with the participant as she relayed her story because her passion, anger and belief were so intense. As a researcher, I aimed during that interview to let my show of emotion be a sign of being present and listening intently rather than becoming a distraction or impediment to the interview.

The interview data provided a description of nurses’ experiences with workarounds in the form of a rich narrative of their thoughts, experiences and decisions. Once I had determined that the analysis of the data would produce a conclusion that would translate to nurse practice, I collected and arranged descriptions, boundaries and quotes to begin my writing. I also considered if I could adequately defend my results and how the results could advise or improve nursing practice. The labels, themes, and supporting text were arranged and rearranged to best represent the data and ensure illumination of the key elements of the nurses’ experiences with workarounds. The goal was not only to ensure that the reader be captivated by the data and results, but also that he or she see and experience its importance to nursing practice.

The original workaround proposal included the process of member checking. My hope was that each participant would review a summary of the data analysis and final results. However, pragmatic considerations related to the feasibility of the thesis project, the availability of the participants, and consultation with my advisor, this aspect of the analysis was dropped. The following results are my interpretation of the data and represent one possibility of the phenomenon.
Research Ethics and Considerations

Research completed with the assistance of human subjects requires the researcher and participants to be aware of the participants’ ethical rights (Polit & Beck, 2008). Research ethics approval for this study was obtained from Trinity Western University in November 5th, 2012, and ethics approval from Grande Prairie Regional College was obtained September 25th, 2012 (Appendixes G & H). Informed consent was obtained prior to all interviews, and individuals could decide freely whether they wanted to be contacted by the researcher again. The consent form included details such as the purpose of the study, the study procedures, confidentiality, risks and benefits of participating, compensation, ethics, and researcher contact information (Appendix C). Each participant returned a signed copy to me and was given a copy to keep. A numerical code was used to refer to each individual, separating identity from the transcribed interview. Participants were aware that their participation was voluntary and that they could withdraw at any time until their data could no longer be extracted from the remaining data. All raw data, including audiotapes, notes, field notes and other private information, such as demographics, were kept separate from all other work in a locked drawer in my work office at GPRC and a locked drawer at my home office. All electronic data files were password protected.

No financial assistance or research funding was requested. Previously anticipated and actual expenses such as travel expenses, thank you cards and small tokens of gratitude, refreshments for meetings, and basic clerical expenses, including a transcriptionist and thesis editor were covered out of pocket. See Appendix I for an itemized expense list.

Scientific Quality

Trustworthiness in the study is embedded throughout the entire process and is evidenced by the research process. I used reflexive notes, field notes, and frequent reorientation to the
interpretive description framework to maintain a credible and explicit audit trail (Jootun, McGhee & Marland, 2009; Dowling, 2006; Wolfinger, 2002; Polit & Beck, 2008; Steubert – Speziale & Rinaldi – Carpenter, 2007). Through reflexive notes, I was able to document the “beliefs, experience and interest of the researcher” to ensure minimal influence by myself through the analysis process (Jootun, McGhee, & Marland, 2009, p.45). Reflexive notes also allowed for critical self-reflection and evidence of the decision making audit trail necessary for interpretive description (Thorne, 2008). Using field notes, a broader perspective of the interview process was achieved and allowed for collection of the interpreted facial reactions and gestures observed (Polit & Beck, 2008; Wolfinger, 2002). The steps of this project such as writing the ethics application, detailing the recruitment, data collection and management all demonstrate scientific quality (Cutcliffe & McKenna, 2004).

It is not possible to remove all subjectivity from a project when the researcher uses the interpretive description framework. Thus, I acknowledge that this project presents one interpretation of the nurse participants’ experiences with workarounds in their work settings. To remove as much subjectivity as possible, I was committed to the process of reflexive journaling to minimize the potential impact of my subjectivity (Thorne, 2008). As more research is completed in the area of nurses’ lived experience with workarounds, additional findings will enhance and confirm my findings.

Summary

This chapter has provided an overview of the research framework, design and procedures used for this project. Interpretive description is an ideal method for providing a clinically relevant description of nurses’ experiences with workarounds and for revealing practice-applicable results. Through interviews in person, over the phone and through Skype, I collected
detailed experiential stories that yielded the results discussed in the next chapter. I obtained research ethics approval from Trinity Western University and Grande Prairie Regional College prior to initiating in participant recruitment. Finally, this chapter has described the ways scientific quality was maintained. The next chapter presents my results and related discussion.
Chapter Four: Results

The nurse participants were candid about their experiences and did not hold back their emotional responses as they told their stories. Some nurses were able to recall the exact details of entire workaround situations, while others remembered sharp details about parts of the workaround. During the analysis process, the engrossing interviews revealed interlaced layers of influences, beliefs and themes. A nurse’s decision to use a workaround is complex and unique to each situation. However, similarities were threaded throughout the process, revealing some readily apparent themes, while other themes were intricately threaded throughout the data and intertwined with other themes, illustrating the interwoven inseparable nature of the workaround decision process.

Through compelling and detailed stories from a range of nurses I was able to begin the research process of understanding nurses’ perceptions and interactions with workarounds. Specifically, this thesis project explores the workplace factors influencing a nurse’s decision to use a workaround, and additionally considers the thoughts, feelings and internal drivers that contribute to the decision course. Workplace and patient factors are interlaced and revealed in each of the themes, but the interviews revealed much more than I had originally anticipated. The nurses’ stories had depth and meaning that went beyond listing the factors they considered or workplace factors that affected the workaround. Although the nurses listed factors discussed further in the summary of this chapter, the real insights came from looking beyond these factors to what influenced and surrounded the nurses. The detailed interviews allowed for the nurses to reveal, discuss and explain components of the workaround scenario that assisted me in detailing the research questions, as well as in understanding the role of the workaround for the nurse. As I utilized the interpretive descriptive method, the following themes began to evolve:
NURSES' PERCEPTION OF WORKAROUND USE

(a) nurse as guardian; (b) weighing risks and benefits; (c) making a conscious choice to use a workaround; (d) the impact of emotional turmoil and upheaval on workaround decisions; and (e) professional relationships. These themes are an intricate web, with each theme playing a significant role in the workaround.

Description of Sample and Workarounds

The sample was diverse in designation and years of experience, with seven participants in total, three LPNs and four RNs. These nurses were working full time or nearly full time in an acute care or emergent care setting. The nurses’ areas of experience included medicine, pediatrics, emergency and other inpatient units, and their experience ranged from three to thirteen years in nursing. Their workaround stories also originated from previous areas of employment that included long-term care and rural hospital settings. From this diverse sample, accounts of different types of workarounds were gathered.

My research revealed that workarounds originate from many different settings and that workarounds can be similar or very diverse. The most common workaround described by the participants was administering non-prescribed medications. On medical units, the type of medication administered ranged from other the counter medication like Acetaminophen or Dimenhydrinate, while in emergency rooms, the types of interventions included giving controlled medications like sedatives to intubated patients. Procedures adapted by nurses included variations in urine collection and maintaining sterility of a luer lock intravenous end (intravenous line looping) or aseptic dressing changes. One type of workaround described was the choice to alter or bypass a procedure to assist the patient (urine collections, aseptic dressing change, administering medication quickly, and intravenous line looping). For example, in one
case the nurse chose to use something other than normal saline to irrigate a dehisced wound due to workplace factors, thus altering the best practice and procedure for aseptic wound care.

Other workarounds involved altering hospital policies such as workload division, visitor policy and discharge policy to suit the situation. For instance, a nurse described a situation where she was caring for a patient who was flown in via emergent medical transport with her husband in the middle of the night. They lived five hours away, and due to the emergency of the situation, the husband did not have any money, identification or any nearby resources. After being told by the nursing supervisor that the husband was not allowed to stay, the nurse snuck him into the back of outpatients and allowed him to stay until it was feasible to call family to come get him. Each workaround scenario is unique and as the nurse works through the situation, the outcome possibilities are infinite.

Below are the themes that emerged from these scenarios. As each workaround is unique, I provide a brief vignette of a workaround example that best captures each theme to provide the reader with context. Each vignette will introduce a theme.

**Theme 1: Nurse as Guardian**

*Nurse A, a mother, and a full-time employee on a pediatric floor easily identified with many of the families and mothers on the unit. A three-year-old girl was admitted with a variety of systemic symptoms lacking an identified origin. While in emergency, this patient received many different diagnostic tests that were invasive in nature, such as a urinary catheter and a lumbar puncture. During the course of her stay, she began to experience side effects from her treatments such as diarrhea that made collecting a sterile urine sample difficult. Her rectum and buttocks was excoriated and the nurse was unable to use an external urine collector despite multiple attempts. After discussion with the physician about the importance of the need to collect the*
NURSES’ PERCEPTION OF WORKAROUND USE

urine, a process the nurse felt was unnecessary; the physician insisted that the collection be done
-- by catheter if necessary. Nurse A thought that the catheter was invasive and not necessary,
and that the family had not been properly been informed about the risks. After speaking to the
family, the nurse decided to improvise the urine collection to send to the lab to save the child
from the trauma and side effects of an invasive procedure. Through trial and error, unsterile
urine was collected and sent to the lab through a very non-traditional procedure. In the nurse’s
eyes, she had protected the child and the family and had still allowed the physician to have the
required diagnostics.

For each workaround scenario, the nurses evaluated why they felt the workaround was a
desirable solution. Their conclusions to use a workaround came in many different ways and
considered a multitude of aspects. The bottom line for the nurses was that they had used a
workaround for the betterment of the patient. More specifically, the nurse acted as a patient’s
guardian or protector, increasing comfort and reducing risk to their patient through the use of a
workaround. This theme is strongly interlaced with subsequent themes, allowing the nurse to
thoroughly analyze, cope and accept the decision to use a workaround through the role as a
guardian. As guardians, the nurses identified factors that they considered during the use of a
workaround as well as additional motivational influences related to their thoughts about their
worth as a nurse and the need to provide optimal patient care. By identifying the patient as a
priority, the nurse was able to live more easily with the decision and to reduce the amount of
residual unrest after the situation.

The nurses described their duty to protect their patients in a number of ways, with each
situation being unique. Some nurses described their value and belief system as a foundational
motivation for protecting their patients. One nurse described her ability to protect her patients
through maintaining her values: “Family-centered practice is one of my most important things, and patient-centered. So what is going to benefit the patient the most?” Another nurse echoed this focus on patient-centeredness through her statement, “they’re taken care of the best that I can do for them.” This participant described characteristics becoming of a nurse and how utilizing them may lead to a workaround but produce a favorable outcome: “caring and compassion is a great characteristic for a nurse, so encompassing that would be trying to take care of all aspects of holistic care on a patient.” By remaining faithful to their value system, the nurses knowingly used workarounds, with the purpose of providing optimal care for the patient and functioning as guardian in the patient’s journey through the healthcare system.

The interviews revealed that many different types of workarounds were utilized. Nurses used the workarounds to protect their patients from a variety of stressors, including those relates to the physician’s order, the healthcare system itself, worry about family members, or any number of additional concerns. For example, the nurse who chose to not do an in-and-out catheter on a young girl for specimen collection believed that the catheter was unnecessary based on previous lab results and the young girl’s history. She stated,

Don’t. Don’t do the catheter. Something was just telling me. Don’t do it, it feels wrong… It's like that protectiveness. Like, you almost... I mean these children aren't my children but essentially, I think as a parent and then also as a nurse who is taking care of pediatric patients, you automatically put your kids in those situations and think, If that were my child right there, what would I want a nurse to be doing for me?

Additionally, this nurse reiterated the importance of first and foremost considering the patient:
NURSES’ PERCEPTION OF WORKAROUND USE

The circumstances can have very positive or very negative effects, depending on who’s involved in it, everyone from the client and myself to the doctor. So if it’s not going to benefit the client, then it should never be done, because ideally, the goal is quality care. Despite the risk of consequences, many of the participants stated that they would have used the workarounds regardless of risk, because the need to help their patient was greater than the risk. One nurse commented, “You know, you feel like you need to help them so you just go ahead and do it anyway.” Another nurse clearly identified that assisting her patient defined her as a worthy nurse, emphatically declaring,

I might get a hand slap for this. I don’t care because ethically right now, this is… and to be honest … CARNa says, “What would a good prudent nurse do? Like to me, the reason for letting ‘Name’ in was because I know he needed, really needed the medical care. He needed the meds, he needed the care.

These examples suggest that these nurses value the care of their patients and value their ability to act as guardians to ensure that their patients receive optimal care during their healthcare experiences. By acting as a guardian, the nurse is able to provide optimal patient care, encompass values, build trust, and mitigate perceived risk to the patient. Workarounds are one way that the nurses are able to function as guardians.

Theme Two: Weighing the Risks versus Benefits

Nurse B, a brand new graduate nurse, had worked in a smaller community hospital. The policy and procedures were not well established and trauma patients were a rarity. During Nurse B’s shift, a critical trauma patient presented to the ER and required rapid infusion of blood products. The physician ordered the rapid infusion of multiple units of blood despite the lack of policy, and proper equipment to monitor the patient and ensure safety. Nurse B, aware of
the critical state of the patient, pressure-infused four units of blood within 15 minutes by standing on a chair and using a manual blood pressure cuff to compress the bags quickly. During the interview, Nurse B stated, “the risk of a transfusion reaction could only be as great as the risk she was experiencing. Either way death was the ultimate risk.”

Participants described an interlaced process of emotional responses and cognitive reasoning as they weighed the perceived risks and benefits of a workaround for both the nurse and patient. The different aspects of risk they considered can be summarized by the following three variations: (a) the risk of not using the workaround; (b) the risk that the workaround may not turn out as intended; (c) the risk to the nurse. At times the benefit was not specifically identified (e.g., the benefit of the patient being able to be discharged earlier) and thus could be viewed more as the absence of risk/detriment to the patient. Often the benefit to the patient was implied by the nurse and not specifically identified other than her belief that the workaround was necessary. Each participant thought of risk in different ways, depending on the situation and the patient. Not every nurse participant considered all of the identified variations and, depending on the nurse and the situation, some variations were weighed more heavily than others.

All participants were able to, even after some time, describe the risk or concern they felt for their patient. The more vulnerable and needful of the workaround the nurse perceived the patient to be, the greater the risk the nurse associated with not using the workaround. Factors like age, acuity, and perceived vulnerability were associated with risk by the nurses when deciding to proceed with the workaround.

The risk assessment performed by the nurses was fluid in nature and changed as the patient or situation evolved. The nurses could not label the risk as mild, moderate or strong, but rather the nurses felt that the risk was either “worth the consequences” or not. The conviction of
NURSES’ PERCEPTION OF WORKAROUND USE

The nurse’s tone, the language used and the way the nurses described the perceived consequence for the patient added weight to the concern the nurses felt for their patients. Whatever reason they identified, the nurses were convinced that the workaround was the right thing to do. They described the consequences for the patient in a variety of ways, for example, as “mortality” and “needed it to survive” or more basic, as “comfort” and “it’s gonna make my patient better.” One of the nurses described her analysis of the consequence and risk of a particular situation as follows:

She was 70, maybe in her 80’s, and fairly frail. It was a kidney challenge… you know it wasn’t like I held this pill or whatever… It was IV Lasix (furosemide) you know, so it was ummm… what was special about this time… why did I do it… because it was going to be harmful to the patient to continue it. I don’t want to say mortality. That might be really dramatic but I mean, really!? You take a little old lady and you keep doubling, doubling and doubling the Lasix. How long before she loses everything. We had challenged her kidneys, the fluids were moving good… You know, that is why! Because it would be harmful to the patient to continue it.

Another participant spoke of still experiencing an emotional response to her decision to use a workaround, and how she had decided the risk was worthwhile. This story involved an emergency room nurse early in her career in a rural hospital who was caring for a trauma patient who required blood as soon as possible. At the time there was no policy to support rapid infusion nor was the equipment present to safely do so:

The person was hypovolemic; they were in shock and needed the blood. At the time I received orders to pressure infuse the blood, and I pressure infused the blood. I knew that it wasn’t right, but then I was also looking at the patient and at the stability of the patient,
NURSES’ PERCEPTION OF WORKAROUND USE

which wasn’t great at the time. So I was basing my practice on patient care and that patient needed the blood, so I went ahead and I done it. It quickly went through my head but the patient was so critically ill that if they had a transfusion reaction, it probably wasn’t going to be as severe as the situation this patient was in at the time. The risk was outweighed… by the severity of the situation.

In these cases, the nurses evaluated the risk to the patient and the gravity of the situation, and subsequently deemed the workaround necessary; that is, they evaluated the risk to the patient of not using the workaround.

The nurses also demonstrated that they consider the potential for the workarounds to not work as intended. Yet, despite the identified risk, the nurses still carried out the workarounds as the risk was deemed to be warranted. In some situations, the risk of the workaround not working as intended was identified as delaying treatment for the patient (as described below). Others described scenarios where physicians’ reliance on nurses to break the rules, for example, insertions of IVs and administering of drugs without orders, became a habit in the department. The following quote describes how the participant collected and sent a urinalysis and culture under the physicians name without an order:

You know, conflict, a feeling like my hands are tied and I’m helpless, but then two days later having the patient treated properly because of action that I’ve taken makes me feel satisfied by my actions. Or two days later nothing has been done, I feel frustrated and angry because of my actions. There was one particular doctor, he would rip it up and ignore the urinalysis for it, could be a week before he would write orders and take care of it to prove his authority. So in the end, you caused more harm than good…. I was angry, just for the client, because you know for a fact that they have a UTI, and in the meantime
they’re suffering because the doctor wishes to show his authority. It also, it got his point across. I never did that again and ensured no one else did that again for that doctor, because really, there was no benefit for it. So, and in the end the patient’s quality of care and safety was compromised because of it.

As exemplified by the quote, the analysis also revealed that at times nurses considered the risk to themselves only as an afterthought.

I think as nurses, we have such a drive to advocate for our patients to make sure that they’re quality cared, that sometimes I feel we put their needs before our own. We just get so wrapped up in client advocacy and forget about ourselves. Am I going to risk my license for a urinalysis? Depending on the circumstances, I just might.

Moreover, another nurse reiterated her drive to advocate for the patient and notes that it takes a lot before she considers herself:

It takes a lot for us to stop and go, “should this be done? Am I practicing safely? The patient may receive quality care but am I putting myself at risk? We don’t pause long enough to ask that questions sometimes. We get wrapped up in the client.

In these kinds of situations, nurses are passionate and convinced that the risk to themselves is minimal in comparison to the risk for the patient. However, the risk to the nurse is closely related to and at times interchangeable with the consequences for the nurse. In reflection, the nurses identified that the risk they thought of most commonly was the fear of was getting caught by their managers. Nurses experienced additional fear about consequences for the patient and about making the wrong decision. However, at no time did the nurses identify that these fears or risks would stop their actions. One nurse recalled a time when she drove her patient home after discharge because she believed her patient had no other option. When asked about what she
thought about prior to helping her patient, she replied “ummm, well safety, right would be a factor. Like she was a little old lady and I felt comfortable with her and I empathized for her, and she didn’t appear to me at the time to have any other option.”

The participants’ analysis of risk was complex. They identified that regardless of the risks they perceived, their concern for the patient made the risk of the workaround acceptable.

**Theme Three: Conscious Choices by Nurses to Use Workarounds**

*Nurse C was working in the hospital in her small rural home town. Many of the patients knew the staff working there. Nurse C’s patient, an elderly woman with no family nearby, was discharged to go home. The community was small with no taxis; the only way to get to and from the hospital was by private vehicle or ambulance. Nurse C decided to drive her patient home despite the risk to herself. Emphatically nurse C stated, “I did this and I’ll take the consequences for it. I did it. I knew I broke a rule. I’ll take the consequences for it. I’ll defend my rationale.”*

A nurse’s choice to use a workaround is not made lightly, nor is it made without considerable thought about the ‘who, what, where and why’ of the situation. The participants described it as a purposeful, active decision that they would repeat. This theme is characterized by three points: (a) the willingness of the nurses to accept responsibility for their decisions and the consequences; (b) the conviction or pride the nurses feel about their decisions; and (c) their awareness of the reality of the workaround solutions.

The nurses understood that their actions were not without consequence to themselves. Each individual nurse weighed the possible consequences to her actions in the form of punitive risk from others within the work setting. Managers were not the only source of consequences; they could also come from other coworkers, including nurses, physicians, nursing supervisors, or from clients/patients. In one example, a nurse described a physician’s anger as a consequence of
her actions: “Several nurses literally had my back while he tore into me. He wrote a full page on his pink sheet about what a bad nurse I was. Dare I, Dare I!!!! And so, he abused me verbally.” However, despite their awareness of potential consequences, the nurses chose to pursue the workarounds and in most cases were proud of their decisions. One nurse participant’s statement embodies both her awareness of potential consequences and her pride in her decision:

Now I would march into my supervisor’s office and say, ‘by the way I just drove Ms. Brown home, so bad on me, but just to let you know. Yeah I did it. I did what was responsible and what a good prudent nurse would do, and I will still defend it, because to me it’s right. I can also see that maybe policy say this, you would have to have such insurance, and no you can’t do that. Yeah, Yeah! I can see that, but that was the right thing to do.

The other participants felt the same and expressed their own brand of confidence and conviction. For example, one nurse stated, “Although, at the time they [workarounds] were viewed as little things. They were viewed as little things that benefit the patient. I was a good nurse because I was willing to do that, and in the end, patient care was best or quality was achieved.” Lastly, nurses identified both their pride in the decision and their awareness of consequences; one nurse declared, “I know what I did was best, the only thing is it’s not the rules, right? So it makes you feel like... cringe.”

For these nurses, comfort and pride in their decision to use a workaround acted as a moral barometer: “If I’m comfortable then I’ll go forward. If I’m uncomfortable, why am I uncomfortable and what should I be doing to make sure that the patient gets what they need?” Being comfortable with the decision and finding it morally acceptable was an integral component of the decision process: “I also feel like it’s your own responsibility to do what you
feel comfortable doing and I kind of feel like… I don’t know… not that you’re on your own but everyone has to make their own decisions, I guess for themselves.”

Additionally, nurses demonstrate a realistic view of what a workaround is and harbor no illusions about the type of solution the nurse has chosen by using a workaround. The participants revealed that the use of a workaround, regardless of motivating factors, is an intentional action by the nurse to improve patient care. Several excerpts from the interviews illustrate the intentional act of using a workaround:

_Participant:_ I would not make it common knowledge to other people that I totally just banished the rules to the side and, you know, did the whole thing, but I am very aware of the fact that I am breaking the rules, and all I think of….

_Interviewer:_ It’s very conscious.

_Participant:_ Yeah, and I’m like nervous about it, too. Like I can feel like…. You know my manager…her office is down the hall. Sometimes she walks by and sometimes I think what does she think of me being in the isolation room with these big signs on the front door, and I’m in here with no gown, and I’m sitting here blowing bubbles. Like I wonder what she’s thinking.

One nurse stated, “I think the worst part is we know, but we take the lesser of two evils.” These nurses recognize that workarounds are a temporary solution that does not prevent the situation from occurring again, nor is it the best solution in the long run, as revealed by the following comments: “If the patient is that unsafe, that confused, the doctor from ER better be coming up and assessing them versus me just trying to fix it with a Band-Aid with sending the UA (urinalysis).” The nurse further stated, “Your hands are tied by the system. You see what the
NURSES’ PERCEPTION OF WORKAROUND USE

patient needs. You can’t get it, but you want it. So do you untie your own hands and put your practice at risk, or do you wait?”

That nurses knowingly utilize workarounds demonstrates that they recognize when they need to use them and can identify the catalyst for the situations. My analysis revealed that the nurses were cognizant of their actions; this awareness is further supported by their willingness to accept responsibility, as evidenced by their pride in the decision and their willingness to consider their risk to themselves. The nurses demonstrated awareness, conviction and intentionality that demonstrate their insights into themselves and their situations.

Theme Four: Emotional Turmoil Regarding the Use of Workarounds

Without going into great detail, it is difficult to represent the emotions felt by the nurses. A retelling does not do the nurse or their story justice. This account of a workaround is by far the most emotional and gripping story from the interviews. Nurse D worked on an inpatient floor and had several years of experience. Her patient, a frail elderly woman, was being treated with a kidney challenge: high doses of intravenous diuretic to produce a certain amount of urine. The challenge was working well, too well, so that the amount of output was exceeding intake, and signs of fluid volume deficit were beginning to present. The nurse made several attempts without success to contact the physician who ordered the challenge. At her wits end, the nurse stopped the intravenous drug. Within minutes the physician appeared on the unit, and began to verbally abuse the nurse. He wrote pages about her insubordination within the patient’s chart and humiliated her in front of her peers. However, the nurse had made the correct decision, as the physician soon ordered the kidney challenge to be discontinued.

It became clear after several interviews that many of these stories, even after time, left the nurses tearful and with feelings of anger and frustration. They spoke about the physical
symptoms they experienced during work in response to workaround situations. Latent emotional responses surfaced during the retelling of stories, with participants wanting some emotional release for the way they felt about the scenarios. In conjunction with the cognitive reasoning involved in choosing a workaround, a complex emotional process is also part of a nurse’s decision to use a workaround.

In their stories, the nurses described intense emotional situations where they perceived a patient’s wellbeing to be at risk. Emotion laden words revealing angst and distress were used to describe how nurses felt during and after the situation. For example, participants frequently used the words anxious, defeated, angry, guilty, panicky, frustrated, helpless, and fearful to describe their feelings. Anger was the most frequent emotion mentioned and included anger at other professionals, anger at the general situation, or anger with oneself. Several of the nurses spoke about being angry when they learned that the situation leading to the workaround could have been avoided. For example, one participant stated,

So, I think it's the times where you discover six hours into your shift that something could have been done. And that really irks you even more because before that, the previous six hours, you're scrambling and trying to make it work, and then you discover that there was something that could have been done. And then you're just angry for the next six hours.

Another nurse participant spoke about the anger she feels towards herself after choosing to use a workaround to save time:

Guess when I feel guilty then I kind of get angry at myself after I've... after I’ve admitted my guilt to myself. Then I feel angry that I've done it. That I've gone against my better judgment and my better knowledge and my knowing. It really affects my conscience sometimes.
The nurses recognized the emotional cost when they used a workaround to benefit themselves as nurses rather than to benefit a patient; afterwards they experienced anger and remorse. At the time, the nurses had identified that it was acceptable to use the workaround; however, upon reflection she felt dishonored and bothered by her decision, reinforcing the participants’ earlier statements about only using workarounds that they feel comfortable with. In conjunction with anger, frustration caused by many aspects of the workaround environment was commonly experienced by the nurses. They spoke of being particularly frustrated when they perceived a physician failing to fulfill his or her responsibilities. One participant stated, “It’s just more the frustration that I’m not... the physician isn’t doing their job properly, and I have to break the rules because they’re not doing their job.” Another nurse spoke of the “lack of courage” by the physician in charge of the code that prompted her to administer the best practice medication without waiting for the physician to speak or provide direction. The nurse stated she had a moment of anxiety -- “holy shit, I just done this!” -- but administered the medication anyways to preserve the patient’s life.

The emotions experienced during these situations are not without consequences. The nurse participants experienced physical symptoms related to workaround situations as well as emotional and mental consequences. Their decision processes were influenced by their emotions. Although the nurses ultimately decided the patients had required the workarounds, they began talking about their decision process in terms of how they felt; for example, “I felt bad for the patient,” “the situation made me sad/ frustrated/angry,” and “I worried about the patient” were statements the nurses used to describe the emotional climate of the workarounds. The highly emotional state of the nurse made the workaround decision difficult and at times resulted in physical symptoms of “jaw clenching,” “headaches,” fatigue, emotional exhaustion, and
sleeplessness. Another nurse stated she was unable to control her blood sugar at work due to her intensified emotional state:

There's a lot of different moments you get as an Emerg nurse, or I've had as an Emerg nurse, that I'd go home and it would probably keep me up at night because I did go outside of my abilities or my scope of practice. I try to keep talking myself down and keep saying to myself, "well you done it because of this". So I try to rationalize things. Sometimes it doesn't make you feel any better when you know you done something. And it was wrong. So it doesn't give…, I rationalize it and try to give myself peace of mind. Which, it kinda does most of the time. But sometimes it doesn't, and then you've got that on your conscience.

However, the nurses reduced the emotional burden of their decisions by recognizing that “I just do what I feel is right for my patient, and so I don’t really feel bad about doing something that is going to help my patient.” Emotions weigh heavily on the nurse and influence the decision to use the workaround.

**Theme Five: Professional Relationships**

*Nurse E has worked on the same floor in the same hospital since her graduation years ago. She has gotten to know many of her colleagues, including the physicians who have admitting and attending privileges. During her set of day shifts, two of her patients presented with changes in their condition such as fever and altered cognitive status. Nurse E wondered if her patients could have urinary tract infections and sent a urine sample to the lab for one patient but not the other. Nurse E rationalized that the physician of one patient would appreciate the action, while the other would consider it to be a violation of Nurse E’s role.*
As the nurses retold their stories, it became evident that they had beliefs regarding the role that professional relationships had on their decisions to use workarounds. Physicians and nurse managers were identified as playing a significant role in situations that led to the use of a workaround. Six of the seven participants relayed stories about the nurse-physician relationship and discussed how they perceived that relationship to impact patient care.

Relationships with physicians were the most readily discussed professional relationships in the workaround stories. Many of the workarounds described were incidents of choosing not to continue with a physician’s order, for example, ordering diagnostics, doing treatments or giving medications. Identified elements that influenced the nurse-physician relationship were the age of the physician, the nurse’s perception of how the physician would react to the workaround, previous relationship with the physician, and the physician’s perception of the roles of both nurses and physicians in healthcare. For example, when thinking about sending a diagnostic test that had not been ordered, the nurses considered both the age of the physician as well as their relationship with the physician. Participants commented that physicians who were younger were more apt to value what the nurses identified as necessary and were more likely to support the decision to use the workaround by providing a cover order. Physicians with whom the nurse had a poor working relationship with were less likely to provide a cover order, making the nurses more reluctant to use a workaround.

The following quotation demonstrates one medical nurse’s perception of the difference she perceived between younger and older physicians and of how the inter-professional relationship is altered by physician age:

I find senior doctors maybe feel that it’s a requirement. Um, what’s the best word to place this without being rude? Some of them have God complexes that this is the way it is and
nurses have a very specific role, and don’t see how the scope of nursing has grown and changed over the years. Where the younger doctors respect our roles and how they have grown and changed, and want to work with us as a team member, versus the captain of their ship, perhaps delegating orders, if that makes sense.

Additionally, another participant identified a similar trait in a physician: “he has, it seems like a God complex. There are some really great doctors and there are some shitty doctors with a God complex and he’s one of those.” Nurses value a collaborative partnership, where they are considered a respected member of the team, as opposed to a hierarchical structure which delineates nurses as laborers.

Physicians’ lack of understanding of the scope of nursing practice was also identified as an area that precipitated workaround use by nurses. Nurses perceived their scope of practice to be larger than what some physicians identified it as. Nurses noted they have the capacity to determine whether or not orders are safe, whereas some of the physicians felt this was not the case. One nurse told of withholding a medication she perceived was not safe for the patient while seeking clarification; the physician, however, disagreed with this action:

*Physician:* “You are a nurse; you do not have the right to change an order.

*Nurse:* “No, but I have a brain and a degree and I have been told to use them both.”

This exchange demonstrates how the nurse viewed herself as having the capacity to recognize an unsafe order but how the physician disagreed, creating a situation conducive to a workaround.

In addition, physicians’ expectations of nurses may also encourage workaround use. Although this pressure was identified as occurring in other areas as well, the nurses who worked in the emergency room frequently noted these expectations. Several nurse participants stated that physicians expected the nurses to fill in the gaps of minimalist orders without direction, creating
NURSES’ PERCEPTION OF WORKAROUND USE

an opportunity for a workaround. The nurses described physician orders as vague, with physicians becoming irritated when the nurses asked for clarification and making statements such as, “just do it,” “just push it, “do whatever.” Short, sharp answers that do not lend themselves to questioning or clarification encourage nurses to fill in the blanks through workaround use. Additionally, some physicians do not complete their prescribing duties, allowing the nurse to write a physician order for things like Tylenol. In one example, a nurse asked for sedation orders for an intubated patient who was beginning to wake up; the physician’s response was, “Give more of what was given earlier.” The nurse again chose the dose and frequency.

Several nurse participants identified that they get accustomed to a particular physician’s preferences and learn to do these activities prior to them being ordered to save time. Unlike chest pain where there is a standing order for all patients to have an intravenous, patients who present to the emergency room with abdominal pain receive an intravenous based on physician preference. One nurse stated, “It depends which doctor is on call, too, because we know which doctors are going to order IVs and all that kind of stuff on everybody. Or there's ones that won't order it on anybody, so then you just kind of hold off and wait.” In these cases the nurses felt like the physicians expected a certain amount of anticipatory care and the ability to foresee treatments. The nurses also valued their ability to anticipate the care needed in themselves, feeling this was a product of experience and intuition aiding in their autonomy.

The nurses, however, identified times when a physician wrote orders and the perception of the nurse was that she was to follow through without proper clarification or procedure, leading to the use of a workaround. The nurses stated that this problem emerges particularly with physicians who work in many different settings and are uncertain of the varying roles of nurses
or the various policies within the hospital specific to each setting. The following section of
transcript describes the nurse’s struggle with having to adapt to the expectations of a physician,
and her perception of how the physician’s behavior and expectation facilitated workaround use.
The physician expected the emergency nurse to have similar capacity as an intensive care nurse.
This expectation and his reaction to questions played a role in her decision to utilize the
workaround of choosing sedation for her patient without a physician’s order.

Especially with some of the Internal Medicine doctors, like... Like I say, if they intubate
or if they've got like an ICU (intensive care unit) patient in Emerg and you and ask them
for sedation orders, they just get mad. They’re just like, "Whatever, just do whatever." I
think, and I don't know because I've never worked in the ICU, but I’m assuming that the
ICU nurses kind of just... they have a better protocol of what they're supposed to be
giving and how much they can give, whereas we don't have that down in Emerg. And so I
feel like they get mad at us because... Which is frustrating, because we're trying to do the
best for our patient within like the legal... our legal limits and our, you know, registration
limits. And they get mad at us because we're not doing it by ourselves. Or, you know,
they have to give us more direction. And so, it makes you feel stupid and it makes you
feel, you know, sometimes like you don't know what you're doing…Like as a nurse I'm
just left to the wolves to figure out this patient by myself. And then when you ask the
doctor, they just kind of get mad at you like you should just know what to do anyways
and just do it.

The physician’s behavior and lack of knowledge encouraged the nurse to use the workaround in
an attempt to not delay patient comfort.
The nurses asserted that they are thinking, knowledgeable individuals who have the capacity to make some of the decisions that physicians are expecting of them. However, there are limits and boundaries to their scope of practice as well as areas in which they lack education that inhibit their practice. Although the nurse noted that advancement in practice, such as being able to send basic diagnostics or prescribe general over-the-counter medications in hospital, would reduce some of the workarounds, it would not eliminate the workarounds the nurses think are precipitated or encouraged by a physician.

Lastly, the nurses perceived that some of the workarounds they use occur because physicians do not fulfill their scope of practice adequately. The nurses recognized that they completed the physician role when needed, for example, in deciding on route, dosage and frequency of medications when physician’s orders are incomplete. Additionally, when physicians failed to take charge of critical situations or failed to timely respond to nurses’ concerns, the nurses took on the leadership role of deciding on the most appropriate action, even if it was outside their scope of practice. In the situations described by the nurses, they indicated that the workarounds could have been avoided if the physicians had fulfilled their roles. One nurse declared, “I am frustrated, and angry, because now I have to use a workaround because he didn’t do his job properly.”

Interactions with physicians were not the only inter-professional relationships identified by the nurses. Nurse managers were also mentioned as playing a role in influencing workaround use. In the following scenario involving a nurse manager, a policy was rigorously applied without compromise, resulting in the use of a workaround by the staff nurse(s):

Every day the manager would create the workload, and every day the same thing. I would get the long-term care patients because they were near the desk. The LPN would get the
more acute patients because they were further away; some of these patients were acute, on a monitor or on a cardiac drip. So I did my work, was charge, and most of the LPN’s work because they couldn’t handle the patients they were given… all of this because the manager believed she was making my workload manageable by giving me the closest patients.

After unsuccessful attempts to resolve this issue with the manager, the staff nurses would leave the workload intact on paper to appease the manager, but agree to alter the workload so that both parties had an appropriate and manageable workload. In this incident, it was not the policy that created the workaround, but rather the manager’s application of the policy led to the problem. This example illustrates that in some cases workarounds are not generated due to an inflexible procedure or policy but rather to the way that individuals interpret these.

**General Insights Surrounding Workarounds**

The general insights identified by the nurses noted that workarounds are a reality of healthcare; as one nurse commented, “If you think otherwise you are fooling yourself.” The nurses’ stories indicate their belief that workarounds will always be in existence as long as people make decisions, alluding that nurses do the best that they can in a complex evolving environment. Workarounds are a byproduct of adapting to an environment that is never stagnant. Furthermore, the nurses believed that workarounds are temporary solutions. One medical nurse stated, “We’d see the short term goals, versus the big picture,” meaning that at times workarounds lead to trouble further down the road. A common example is a night shift nurse choosing to administer Acetaminophen and leaving a dayshift nurse to obtain the cover order, creating a workaround ripple effect. Workarounds were viewed as ways to solve immediate
NURSES’ PERCEPTION OF WORKAROUND USE

problems; they do not, however, solve the problems that led to using the workaround in the first place.

Despite feeling that workarounds were a reality of healthcare, the nurses felt that workarounds should not be part of a best practice environment. One participant stated that the more education one has, the more aware of the workarounds one becomes. A prime example was the looping over of intravenous lines to preserve sterility. The nurse looped over luer locked intravenous tubing into the first port in an attempt to save time and preserve sterility. However, once the nurse learned that this process achieved the opposite effect as desired, the behavior stopped. Some RNs believed that LPNs are more likely to use workarounds, since they cannot predict as accurately the consequences of their decisions. Additionally, nurses with more experience were more likely to use workarounds, since younger nurses still believed in following policies and procedures without exception.

Summary

The aim of this study was to define basic patient factors or considerations such as acuity, age, or other patient indicators. Although the nurses did mention such considerations, the interviews revealed information that delved into the core of how those patient factors are considered and what they add to workaround situations and a nurse’s practice. This study was able to explore the subtle and interlaced connections that identify the roots of nurses’ perceptions of workarounds and to begin describing the nuances of the nurses’ experiences. Nurses did consider patient factors and workplace factors in their decisions to use a workaround, often at length, but their stories also provided the researcher with data that produced the themes discussed earlier.
NURSES’ PERCEPTION OF WORKAROUND USE

Making the decision to use a workaround is a complex process laden with many different aspects. Each nurse brings his or her own philosophy, knowledge, perspective, and education to the situation, adapting the factors considered. Because of the variety of situations and individual perspectives, workaround decisions are complicated and multifaceted. As identified by the nurses, the patient is the centre and the beneficiary of the workaround and the nurse’s care. No one theme is independent of the others and each entwines itself into the workaround scenario in varying degrees. The data revealed that the nurses experience a very intricate cognitive reasoning process. As well, the nurses undergo a profound emotional experience when choosing to use a workaround. These two separate processes are unique in that the nurses identified them as separate aspects of deciding to use a workaround. However the feeling and thinking aspects work together in guiding nurses’ decisions to use workarounds. In conclusion, it is not an easy or simple decision to choose to use a workaround.
Chapter Five: Discussion

This chapter delves into the implications of this study for nursing and future research, as well as the study’s limitations and the similarities and differences between my findings and research literature. I will first provide a brief overview of the study’s findings in comparison to current literature. Second, I will note the limitations of this study. Areas for future research and implications for nursing practice are discussed in chapter six.

Comparison to Literature

This project has barely scratched the surface of nurses’ perception of workaround use. During the course of the study, several compelling themes began to illuminate the complex relationship between nursing and workplace workarounds. Five themes emerged: (a) nurse as guardian; (b) weighing the risks and benefits; (c) making a conscious choice to use a workaround; (d) the impact of emotional turmoil and upheaval on workaround decisions; (e) professional relationships. Literature exploring workarounds has focused on patient safety outcomes, medication administration workarounds and the challenges of adapting to an environment that frequently introduces new policies, procedures and technologies. Although this study also addresses workarounds related to medication administration and patient safety, the study reveals different perspectives on these matters. The lens of perception was solely from the nurses’ point of care. The qualitative analysis offers rich perspectives on why nurses participated in workarounds, focusing on their point of care perspective, rather than vaguely detailed rationales, assumed observations and secondhand reporting. The discussion below reveals several differences between knowledge from the existing literature on workarounds and the results of this study that capture the unique perspective of the frontline nurse.
Theme 1: nurse as guardian. The first theme, *nurse as guardian*, describes the goal of the nurse to use workarounds for the betterment of the patient. The nurse perceived that the workaround was a necessity and allowed the patient to receive optimal care. The nurses in this study cited a multitude of reasons for why workarounds resulted in better care, including reduced trauma to the patient. Workarounds were described in terms of “what a prudent caring nurse would do.” The ideal of timely care, a motive that appears frequently in literature exploring workarounds, was often discussed by the nurses in conjunction with other factors (Debano et al., 2013; Vestal, 2008; Westphal, Lancaster, & Park, 2014). Other factors noted in the literature but scarcely mentioned in the interviews included a lack of awareness of guidelines and protocols, disagreement with the rules, previous knowledge of patient preference, and attempts to save time (Debano et al., 2013; Vestal, 2008; Westphal, Lancaster, & Park, 2014; Popescu, Currey, & Botti, 2011; Collins, 2012). This theme differs from the findings in existing literature and highlights the nurse’s protector-like role with the patient and the amount of value nurses place on providing excellent care.

Descriptions of the nurse as a guardian have begun to appear in nursing literature, although not within literature exploring workarounds. Most commonly, when the concept of guardian is used in healthcare, it refers to an individual who is responsible for making decisions for someone not capable of doing so for him or herself (Oxford Dictionary, 2015). Similarly, the nurse as guardian theme describes nurses’ innate drive to protect and provide optimal care for their patients. Jacobson et al. support this theme when stating that “the nurse acts as a vigilant guardian by recognizing the significance of subtle changes in a patient’s condition” (2010, p. 347). Further, researchers investigating the development of nurse/patient relationships asserted that patients expect their nurses to look out for them and to deliver the best care possible, an
NURSES’ PERCEPTION OF WORKAROUND USE

intention clearly demonstrated by the nurses in this study (Reis et al., 2010). Other studies, particularly in palliative care, have referred to the nurse as protector, where nurses see themselves as responsible to provide “comfort and care, and to nurture and protect patients and families” (McCallum & Conigley, 2013, p.27). These studies reinforce the protective nature of nursing and can be extrapolated to apply to a nurse’s intent to use the workaround for the betterment of the patient.

Last, this theme of nurse as guardian supports the definition of workarounds provided by Halbesleben, Rathert and Bennett (2013). These authors argue that it is the practitioner’s motives to assist the patient rather than to complete the task faster that differentiates a workaround from other constructs, particularly those with a negative correlation such as violation or shortcut. The nurses in this study demonstrated significant consideration for the patient, the scenario, the potential outcomes, their morals and values, the risks and, lastly, themselves. The nurse’s motivation to use the workaround to protect the patient is what defines the intentionality of the action, removing any suspicion of malicious or self-serving. The nurses’ description of their bottom line as the patient’s wellbeing demonstrates their pure intentions in using workarounds.

Theme 2: weighing the risks and benefits. The second theme, weighing the risks and benefits, defines the dual nature of workarounds, and a nurse’s consideration of whether the workaround is ‘worth the risk.’ The nurses identified the risk to their patients, the risk to themselves and the risk of the workaround not turning out as intended. The nurses described the great consideration they gave to ensuring the workaround would help their patients and not place patients at increased risk. Little research has been done regarding how nurses assess and measure risk. However, Benner noted that risk plays an important part of decision making in nursing: “… the nurses must use discretion… and are expected to assess what they should do to provide the
best possible care for the patient… even though this may involve risk for them [the nurses]” (1984, p. 139-140). While there is significant emphasis in workaround literature on the risks of workarounds and a great deal of speculation that they lead to negative outcomes, “no one has specifically determined the risk to patients from workarounds” (Halbesleben, Wakefield, & Wakefield, 2008, p. 8).

This study demonstrates that nurses give considerable thought to risk through a number of lenses. Debono and colleagues noted that “nurses are more likely to work around rules if “following a rule was perceived to carry more risk than not” (2013, p. 10). In a similar view, some workaround literature has noted the idea of harm prevention (Collins, 2012). This concept appears to be closely associated with the idea of risk to the patient in that workarounds or “rule bending,” as identified by Collins (2012), were not acceptable if they brought serious harm. Further investigation into the literature reveals no previous or current research that identifies risk as an assessment component prior to or during the use of a workaround. Some authors minimally suggest that nurses consider the consequences or risk to themselves, often in the form of repercussions from a supervisor or manager (Collins, 2012; Spear & Schmidhofer, 2005). The nurses in this study discussed how workarounds are considered worthwhile despite the potential risks or adverse consequences that they may experience. This study provides a foundation for understanding the importance nurses place on risk analysis for their patients, facilitating future research on this subject.

**Theme 3: conscious choices by nurses to use workarounds.** Theme three outlines the detailed cognitive consideration nurses give to choosing a workaround. *A conscious choice by the nurse to use a workaround* is illustrated by three main considerations: (a) the willingness of the nurse to accept the consequences of the decision, which could be punitive in nature; (b) the
conviction and assuredness of the nurse of the correctness of the action; (c) the nurse’s awareness that workarounds are temporary and do not always work out as intended. These considerations demonstrate that nurses put significant thought into using workarounds in their practice.

Workaround research has discussed the action of using workarounds as a first-order problem-solving initiative. That is, although the workaround may provide an immediate solution, the larger underlying problem that caused the problem is not addressed (Westphal, Lancaster, & Park, 2014; Debono et al., 2013). This research points out that first-order problem solvers do not fix the underlying problem and only find ways to address their immediate concerns (Vestal, 2008; Halbesleben, Wakefield & Wakefield, 2008; Westphal, Lancaster, & Park, 2014). The results of the current study contradict that assertion. The nurses in this study recognized when they use a workaround in practice, if it is used often, and how using it may be potentially shortsighted. Because these nurses attempt to resolve their concerns before using a workaround and attempt to mitigate any pitfalls for the patient, they demonstrate that more than first-order problem solving is involved. Many of the nurses sought other means of arriving at a solution prior to using the workaround. Speaking to the ordering physician, attempting to contact the physician on call and searching for the appropriate supplies were some of the many solutions the nurses considered before choosing to use a workaround. Nurses demonstrated these “mindful behaviors,” illustrating a thoughtful approach to the workarounds used (Wheeler, Halbesleben & Harris, 2012).

Many of the nurses in this study recognized the flaws in the system in which the workaround originated. As observed by Rathert, Williams, Lawrence and Halbesleben, “processes that are optimal for the organization in terms of large numbers of people (safety,
NURSES’ PERCEPTION OF WORKAROUND USE

production) may seem to be suboptimal for the individual” (2012, p. 2). One nurse eloquently described the web of the healthcare system, and how both the patient and nurse are caught within the net:

There is this internal conflict of being trapped within the system. You are part of the system and you’re here to help clients and help them improve their health but, in the end, the system has flaws too, right? There’s only one ER doctor between two and whenever, and they’re busy or not answering their pager or trapped in a room with a code. You know, you can’t get a Tylenol order for whatever reasons, right? And what seems simple to them seems big to you. And how long do you wait as things escalate? Just being part of the system and can’t get the proper, or I guess the desired outcome that you want. Because you can see, as nurses, the big picture of how something as simple as Tylenol could benefit your client.

Rather than supporting the workaround literature’s assumption that nurses are only confronting the surface layer of problems, my research study revealed that the nurses are receptive to the processes and systems that create the concerns in the first place. It contests Vestal’s statement that “the real need is for nurses to recognize the workaround when they do it and begin to generate better process to eliminate the need for it again” (2008, p. 9). The challenge becomes integrating feedback and nursing observations into point of care policies and procedures to help reduce the amount of snags that may require first-order problem solving. Healthcare cultures are rarely set up to allow nurses to provide feedback regarding workarounds and other first-order problem solving without punitive action (Tucker, 2009). A key example is a nurse who did not have normal saline available to irrigate and keep moist a dehisced wound late on a Sunday evening. The solution proposed by the nurse of having the stock room and cart top
ups moved to alternative days to accommodate the weekend and to oversupply normal saline
during times of high wound acuity would have reduced the likelihood of this problem occurring
a second time.

My research on workarounds began with the goals of improving patient safety and
identifying ways to improve poorly performing work systems. Information was pulled from
many different areas, including aviation, nuclear power and human factors. I found similarities
related to workarounds between nursing/healthcare and these other areas. For example, deviated
normalization, the habitual behavior in an organization constantly repeated by more than one
staff member, was identified to occur in nursing in the form of a ‘sacred cow’ culture
(Pennsylvania patient safety authority, 2005, p.1). Nursing literature surrounding workarounds
describes nurses as adapting to constraints in their environment, leading to workplace attitudes of
“no harm, no foul” (Pennsylvania Patient Safety Authority, 2005, p.1) or “this is the way we do
things here” (Beaulieu & Freeman, 2009, p.16).

However, my study revealed that in the majority of workaround cases I examined, the
‘sacred cow’ culture did not exist. Instead, the nurses demonstrated a consciousness of the
decisions they made and an awareness of the factors that influenced both their decisions and the
outcomes. Among the seven participants who discussed their stories, workplace culture was
mentioned in only a few cases, and in those cases, the culture referred to could not be termed a
“sacred cow.” Anticipatory care or predicting care needs, such as starting an intravenous on
someone who appeared physically unwell, was the expectation rather than a passed down
idiosyncrasy. Nursing judgment and knowledge was used to determine who was physically
unwell and likely to need intravenous treatment, as opposed to blindly applying an ‘everyone
gets an intravenous’ rule. Furthermore, the nurses revealed substantial consideration of risk to
both themselves and their patients, illustrating that the use of a workaround is not just cultural habit but a thoughtful, purposeful act.

**Theme 4: Emotional turmoil regarding the use of workarounds.** Theme four, *emotional turmoil regarding the use of workarounds*, encompasses the emotional upheaval that occurs during workaround situations. All of the nurses disclosed workaround situations that led to emotional unrest and residue. At times, the workaround itself caused the emotional unrest, at other times the situation that propelled the nurse to use the workaround caused the emotional unrest. Recently, literature examining workarounds has begun to look at the burden workarounds place on those who use them in the workplace. One of the powerful themes that emerged during this study was that of nurses experiencing emotional turmoil during their use of a workaround. In 2012, Rathert, Williams, Lawrence and Halbesleben noted that workarounds are linked to “exhaustion in healthcare workers, particularly nurses” (p. 2).

The nurses in this study experienced a wide range of emotions during the workaround, and afterwards some nurses had lasting physical side effects such as sleeplessness, jaw clenching, headaches and exhaustion. Research has shown that in some cases workarounds can lead to an increase in workplace injuries due to emotional exhaustion (Halbesleben, 2010). This study further supports the finding that workarounds can increase exhaustion, add ‘emotional labor,’ lead to poorer job satisfaction, and increase turnover (Rathert, Williams, Lawrence, & Halbesleben, 2012; McVicar, 2003). However, research in this area is limited. This study has identified a significant gap in understanding the effects of workarounds on nurses’ emotional wellbeing.

On the flipside of emotional turmoil, several nurses noted that workarounds provide an emotional rush that made them feel good. Previous studies have noted that nurses feel more
NURSES’ PERCEPTION OF WORKAROUND USE

competent and have a sense of gratification when they are able to optimally provide care for their patients through a workaround (Lalley & Malloch, 2010; Vestal, 2008). Nurses from the current study used phrases like “good for my soul” and “I felt valuable, I could do that, I could help them.” Some research suggests that the sense of gratification and of being able to individually solve a problem leads to the proliferation of workarounds (Debono et al., 2013).

Theme 5: professional relationships. Lastly, theme five, professional relationships, reveals the nurses’ perceptions of how professional relationships influence the use of workarounds. Nurses described relationships with nurse managers, nursing supervisors and physicians as impacting their decision to use a workaround. They most readily discussed their relationships with physicians in both a positive and negative light, that is, their relationships with physicians either encourage or discourage the nurse from using workarounds. Debono et al. noted a similar dynamic; if a strong professional relationship and trust were present, the belief that the rules were negotiable was observed (2013). Nurses in this study stated that they performed unordered interventions on patients if the physician routinely ordered these and the nurses believed that they were expected to do so, supporting the finding by Debono and colleagues that a “professional expectation that nurses will solve problems contributed to workarounds” (p. 10).

Differing from previous research, which noted that technology was one of the main perceived blockages within the healthcare setting, this study found technology to be one of the least discussed perceived blocks (Vestal, 2008; Halbesleben, Wakefield, & Wakefield, 2008; Carayon et al., 2007). One story out of 23 discussed a blockage to medication administration by means of Pixas, an automated medication dispensary. The second most-described workflow block in literature is protocols and guidelines, which were mentioned with more frequency then
technology during the interviews. Particular protocols frequently discussed included medication administration, infection control, and specific facility policies, including workload division and guest visiting policies.

However, the most frequently discussed blocks in this study pertained to people, in particular, physicians and nurse managers. Halbesleben, Wakefield and Wakefield noted a similar block, describing the nurse as trying to meet specific care needs, but not being able to fully communicate the necessary information to the physician prior to carrying out the action required (2008). What this research adds is that workarounds are used because nurses perceive the physician has not adequately completed his or her role with the patient (e.g., physicians not ensuring orders are complete or not adequately documenting physical assessments). Participants described several workaround scenarios where the nurse felt the physician had failed to adequately perform his or her job, resulting in a workaround. Examples included the perception that the physician did not review the order in a timely fashion, did not respond to a page, and did not complete patient orders. In some cases, the nurses perceived that the physicians expected them to fill in the gaps. Relational factors, including those pertaining to nurse-physician relationships, have been identified in nursing literature and discuss how trust and previous collaboration can impact the belief that workarounds are appropriate and rules are negotiable (Debono et al., 2013).

Limitations

Although this study has revealed valuable insights, several limitations need to be taken into account. First, the sample consisted of only seven participants. This sample size is too small to extrapolate to the general nursing population. Second, the study participants were nurses currently practicing in northern Alberta. This area has unique population characteristics, such as difficulty in recruiting healthcare workers due to the northern setting, resulting in chronic
understaffing and advanced scopes of practice for Licensed Practical Nurses; these dynamics may have influenced the type of workaround stories the nurses described. Participants living in other geographic locations may have different experiences. Third, this study asked nurses to share incidents where they knowingly did not follow policy or best practice. There is the potential the participants were less than truthful while telling their stories to protect themselves.

Fourth, this study revealed more workarounds caused by a significant agent, such as declining health, than workarounds resulting from habitual behavior. This could be because habitual workarounds are so ingrained that these nurses no longer recognize them as workarounds. Last, work is continually being done on defining what constitutes a workaround. This study used a broad definition that allows broad encompassing stories to fall within the workaround range. Thus, since it is hard to delineate workarounds from other behaviors, this study may include workaround stories that do not fit some definitions, making it difficult to compare this study’s results with those of other studies.

Summary

This study provides the beginning of an in-depth look into nurses’ use of workarounds in the workplace setting. It begins to conceptualize nurses’ perceptions of themselves in relation to the workaround and the patient (guardian and risk) as well as the emotional and cognitive connections between workarounds and the nurse and the relational factors that influence workaround use. Similar significant elements within existing literature and this study are the findings that nurses’ motivation to use workarounds is much more important than their desire to save time, that workarounds contribute to the emotional exhaustion and turmoil felt by nurses in the workplace, and that positive feelings after workaround use perpetuate the cycle of use.
NURSES’ PERCEPTION OF WORKAROUND USE

Differences between the literature and my study are noted as follows: First, nurses are more than first-order problem solvers; they seek to resolve problems prior to using a workaround. Second, habitual workaround attitudes maintained as a ‘sacred cow’ culture appeared less often in my study than existing literature suggests, as did technology as an obstacle. Lastly, this study has placed more significance than existing literature on relationships within the workplace and their influence on workarounds used by nurses.

Limitations identified in this study were the small sample size, the population characteristics and the risk that participants were not completely honest about their workarounds stories. Further limitations noted were that habitual workarounds may not have been reported due to their ingrained nature in practice and the definition chosen by myself as the workaround definition utilized for this study. There are a multitude of definitions that could have been used, and other researchers may not agree with. In the following final chapter, future research and implications to the nursing practice will be discussed.
Chapter Six: Conclusion and Recommendations

Within the final chapter of this thesis project, the future research, implications, and conclusion will be discussed. The journey of this thesis project has led the discussion through understanding the importance of exploring nurses’ perceptions of workaround use, into the background of how the study was conceived and how the literature provided a foundation for the interpretive description study. The research method and analysis provided a foundation of how the results chapter was gleaned and later discussed the relationship between the results and literature. Nurses’ experiences are pivotal when exploring workarounds from a frontline care perspective. They use, work within and adapt to workarounds as necessary to ensure that patient care is delivered well. The observations and recommendations below assist with allowing nurses practice within the healthcare system and workarounds.

Further research

Throughout the process of this study, many additional questions have emerged. Some nurses even posed additional research questions about workarounds and the healthcare setting during their interviews. One nurse, a full-time emergency practitioner, was the local champion for the ‘lean’ healthcare initiative, the process of making healthcare systems more efficient by removing redundancies and extra steps (Rakesh Sharma, 2015). The nurse hypothesized that the ‘lean’ process will assist in reducing the number of workarounds, as the goal of ‘lean’ thinking is to remove workflow blocks. Alternately, she suggested, it could lead to more workarounds if too many systems were changed at once. Her perspective is interesting, given that workaround literature describes how workplace systems either contribute to or prevent workaround use. What follows are the identified areas for research that were unearthed during this study.

Significant work has already been done in defining a workaround. However, it may be difficult to get experts to agree on a singular definition as there are so many opinions about the
idiosyncrasies of workarounds (e.g., short cut versus workaround versus violation) (Halbesleben et al., 2008; Lalley & Malloch, 2010; Vestal, 2008; Tucker, 2009). Defining workarounds and ensuring nurses are educated on what workarounds are will allow for thorough reporting of workarounds through reporting systems. As nurses become more informed about workarounds, reporting should become more consistent and reliable based on a shared understanding. In the current AHS reporting system the three options available to nurses are “Adverse Events, Close Calls and Potential hazards” (AHS, 2015, n.p.). Without a singular definition or understanding of workarounds the nurses do not know which option to report the workaround as, thus the workaround is not tracked or routinely identified by an external source. In addition, with a common definition researchers could provide more applicable recommendations for the nursing field. Most existing literature describes the need to change organizational culture, including eliminating blame culture and changing nurses’ attitudes towards workaround reporting and system failures such as unintentional blocks that create workarounds (Halbesleben & Rathert, 2008; Halbesleben, Wakefield, & Wakefield, 2008; Vestal, 2008; Lalley & Malloch, 2010). However, these generic recommendations do not appear to have had a significant effect as workarounds continue to be prolific in nursing. These generalized recommendations do not identify specific areas for improvements. Defining workarounds more thoroughly could allow researchers to examine workarounds in a more focused light in areas identified by previous knowledge. For example, with a more specific workaround definition, frontline nurses could be more easily involved in policy and procedure creation and implementation.

This study reveals that workarounds and their aftermath could have a significant impact on nurses. The emotional impact of workarounds on nurses has yet to be researched in depth. An article by Rathert, Williams, Lawrence and Halbesleben (2012) began to examine the impact on
NURSES’ PERCEPTION OF WORKAROUND USE

nurses through the lens of emotional exhaustion. My study adds the finding that the emotional impact on nurses is more significant than previously noted. Emotional exhaustion, negative physical symptoms, feelings of futility, and work dissatisfaction were noted in this study and should be given further consideration. Given the growing shortage of nurses in the workplace, the increasing patient acuity, and the unpredictability of frontline care, a deeper understanding of the impact workarounds have on nurses will help to preserve the emotional and mental health of the current workforce (Campbell, 2011; Collins, 2012; Debono et al., 2013).

Further research is also needed to create a better understanding of the impact of professional relationships and other relational factors on workarounds used by nurses. This study and previous nursing workaround research has begun to look at the connections between professional relationships and workarounds as well as to examine the consideration that nurses gave to those relationships before, during, and after the workaround. Nurses in this study revealed significant frustration and concerns regarding physician practices, or what the nurses perceived to be gaps in practice, that could result in a workaround. Debono and colleagues (2013) noted similar incidences, including social and professional factors, and cited physicians’ ignoring of nurses’ input as well as lack of professional etiquette, poor communication, and avoidance of confrontation as reasons nurses use workarounds. Further research should focus on exploring why these gaps occur and how they can be prevented. Contrary to what nurses reported to Debono and peers (2013) working around problems should not be routinely part of a nurse’s job.

Implications

Several aspects of this study can impact nursing practice and the frontline care nurses deliver. Workarounds have become common in nursing and are considered to begin as soon as
NURSES’ PERCEPTION OF WORKAROUND USE

nurses graduate and begin practicing (Vestal, 2008; & Lalley & Malloch, 2010). But these do not necessarily need to be equated with each other, and nurses are in a unique position to provide feedback and influence workplace change (Morath, 2011). Researchers argue that nurses need to understand the importance of providing harm-free care and the system dynamics that create conditions for improved outcomes, professional development, teamwork and optimal system performance (Morath, 2011). This study reveals that nurses have the aptitude and solution-focused mindset to positively advance policies and practice.

Healthcare managers, nursing educators, and policy creators need to optimize frontline nursing staff for their knowledge of the workplace. Nurses practice every day on the front lines, functioning within policies, procedures and unique systems. They experience the pitfalls, successes and benefits of both new and old systems. Utilizing a frontline nurse’s perceptions, input and opinions will assist managers in preventing workarounds being created in response to a poorly performing system, policy or procedure.

Unlike several studies that have identified many workarounds as being habitual and just being part of practice, the nurses in this study revealed awareness of the situations as well as solution-focused mindsets. By utilizing their experiential knowledge, nurses can identify blocks or challenges prior to policies and procedures being implemented in practice. Nurses also have a responsibility to be proactive and to reveal their observations and feedback regarding workaround practices to those who can affect change.

There is potential for workaround situations to lead to practice-based evidence. As healthcare moves away from a culture of blame to an inquisitive culture, more opportunity arises to research common practice alterations for their potential to become policies and procedures. A nurse with a cognoscente mindset, “the thoughtful practitioner who carefully describes each
NURSES’ PERCEPTION OF WORKAROUND USE

unique patient, and measures the results of each clinical decision made,” can help to advance clinical practice (Swisher, 2010, para 4). This will also provide evidence to educate and inform nurses of those practices that should not be done. One workaround in this study involved a nurse looping over intravenous lines to save time and to reduce the amount of foot traffic needed. This workaround had become an established practice on the general medical floor until the staff was reeducated. Nursing educators researched resources that could educate the frontline staff about potential harmful patient consequences and the rationale why looping is not acceptable. Although this process took several months to take substantial effect, the number of incidences of looping was greatly reduced. In similar incidences, the presence of a workaround may spur further education and advancement of practice on the floor.

Nurses also need to be mindful of the impact of workaround situations on their emotional and mental health. This study has demonstrated that nurses are greatly impacted emotionally by workaround situations. For nurses, leaving their jobs or continuing to experience emotional residue from work situations, including workarounds, can have lasting effects (Epstein & Delgado, 2010). Nurses should be encouraged by their managers and peers to utilize already existing debriefing and counseling services if unresolved feelings persist. Furthermore, nurses should be encouraged to be more mindful of workaround situations, and to take appropriate action where needed to seek resolution. This action could include speaking to peers regarding the situation, providing feedback or alternative solutions to managers and educators, or even at times ensuring that concerns about other healthcare professionals are heard.

Conclusion

This study revealed some interesting correlations and disparities between existing literature and actual workaround use. Nurses have been described in nursing literature as the guardians or protectors of patients. Similarly, nurses in the study professed their drive to use a
workaround for the benefit of the patient more than any other motivation such as saving time. The nurses demonstrated an awareness of the causes of the workaround situations and the steps necessary to prevent workaround use, demonstrating their potential as a resource to help prevent workaround blocks before they occur. The emotional turmoil experienced by the nurses supported the literature’s correlation between workarounds and the emotional upheaval felt by the nurses.

Significant additions to the literature were also noted. Nurses in the study viewed variations of risk to the patient and themselves as an important consideration prior to using a workaround. The efforts of the nurses in the study to ensure that the risk to the patient of using a workaround was worthwhile were substantial in comparison to the literature findings. Moreover, the number of workarounds the nurses described as being caused by relationships with coworkers, mainly physicians and nurse managers, was significant. Nurses believed that a significant amount of workarounds were due to physicians’ failure to complete their jobs. Finally, the nurses in this study rarely described workarounds due to habitual behavior, while this rationale was common in workaround literature. The workarounds described in this study were unique situations that required innovative solutions from the clinical staff.

These similarities and differences raise some stimulating aspects for future research. Further refining of the definition of a workaround and greater understanding of the role of workarounds are needed. These could assist healthcare experts to provide more pinpointed recommendations and areas for improvement. More research needs to be done to consider the full emotional and psychological impact of workarounds on nurses. Nurses already experience situations where debriefing and counseling are essential; some workaround situations require these as well, given the emotional unrest and turmoil described by the nurses in this study.
Finally, more research about the correlation between professional relationships and workarounds is needed. In both the existing literature and this study, relational factors were shown to be important factors that contributed to workarounds. In this study, nurses perceived a gap between the physician role and their role, leading to a disparity that contributed to a workaround. Future research on both the physician’s and nurse’s roles should focus on identifying why this gap exists and how it can be eliminated.

Implications to nursing practice also need to be recognized in relation to the results. Nurses have the knowledge, frontline experience and capacity to assist policy makers with identifying potential blocks that lead to workarounds prior to policies being implemented. This consultation could assist best practice and current floor practice to merge smoothly, preventing habitual workarounds from being created. Similarly, nurses have the responsibility and applied knowledge to bring concerns and feedback to appropriate individuals to elicit change. Last, nurses should ensure that their emotional and mental health is dealt with during times of stress and concern such as potent workaround situations. Nurses should be encouraged to first take appropriate steps to resolve these feelings and to ensure unresolved concerns are addressed. These steps will assist in preserving the current workforce as well as ensuring competent, safe staff.
References


NURSES’ PERCEPTION OF WORKAROUND USE


NURSES’ PERCEPTION OF WORKAROUND USE


NURSES’ PERCEPTION OF WORKAROUND USE


NURSES’ PERCEPTION OF WORKAROUND USE


NURSES’ PERCEPTION OF WORKAROUND USE


## Appendix A: Literature Review Table: Proposal & Update (new additions in italics)

<table>
<thead>
<tr>
<th>Date</th>
<th>Database Searched</th>
<th>Key Words</th>
<th>Result</th>
<th>Process Log (all articles picked which included information regarding workarounds and nursing)</th>
<th>Printed for Proposal</th>
<th>Used³</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/12/2012</td>
<td>CINAHL</td>
<td>(workarounds or deviation or rule violation or “shortcuts” or “alternative work process” or rule violation or responsible subversion or rework avoidance) AND (nursing or nurse)</td>
<td>52</td>
<td>8</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>26/02/2015</td>
<td></td>
<td></td>
<td>3</td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>8/12/2012</td>
<td>PubMed</td>
<td>S/A</td>
<td>28</td>
<td>6</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>26/02/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/12/2012</td>
<td>Medline</td>
<td>S/A</td>
<td>36</td>
<td>7</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>26/02/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/12/2012</td>
<td>Cochrane Database</td>
<td>S/A</td>
<td>12</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>26/02/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20/12/2012</td>
<td>Canadian Health Research Collection</td>
<td>S/A</td>
<td>25</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>27/02/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20/12/2012</td>
<td>Google &amp; Google Scholar</td>
<td>S/A</td>
<td>6 pages scanned</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>27/12/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20/12/2012</td>
<td>Dissertation Express</td>
<td>S/A</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>27/02/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20/12/2012</td>
<td>Sage</td>
<td>S/A</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>27/02/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20/12/2012</td>
<td>PsychInfo</td>
<td>S/A</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>27/02/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20/12/2012</td>
<td>Web of Science</td>
<td>S/A</td>
<td>25</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>27/02/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NURSES’ PERCEPTION OF WORKAROUND USE

1 There are two sets of results because of the time lapse between the original search and the completing of the thesis. The second result is to ensure all new research published was considered for the project. In some cases no new research articles were identified.

2 The printed for proposal column represents all the articles printed for the proposal and used to inform the start of the research project.

3 The used column refers to the articles printed and utilized for the thesis. In some cases after a more thorough review of the article or research, it was deemed not usable for the thesis project.
Appendix B: Letter of Invitation

Casandra Jordan: Principal Researcher
Student: Masters of Science in Nursing
Trinity Western University: Langley, British Columbia
Thesis: Nurses Experiences with Workarounds

Dear Sir or Madam.

My name is Casandra Jordan and I am conducting a qualitative research study as part of my Masters of Science in Nursing program at Trinity Western University. I am currently recruiting Registered Nurses and Licensed Practical Nurses in Alberta to participate in a study focused on describing nurses’ experiences with workarounds in their practice. Workarounds are alternative work processes that are other than an established work procedure that nurses may use in their nursing practice. This research is intended to contribute to improved nursing practice through increased understanding of the factors nurses consider when using a workaround.

You are being invited to participate as you are a registered/licensed practical nurse and, have undoubtedly witnessed new procedures, processes and the reinvention of processes, in other words ‘workarounds’. You will be invited to share your knowledge and experiences with workarounds through in-person interviews.

If you are interested in participating in this research and are a Registered or Licensed Practical Nurse who is practicing in Alberta, please contact me by November 1, 2012, using the telephone or email contact information provided above. I will be happy to further discuss the study and provide you with further information. If you choose to participate, you will be asked to take part in one or two in-person interviews with me at a mutually agreeable time and location to discuss your experiences with workarounds. Each interview may take up to one hour of your time. You may also encourage others to participate in the study by providing them with my contact information. In addition, for your further consideration, a copy of the research study consent form has been attached.

Please do not hesitate to contact me at your convenience with any questions or concerns regarding this research study project.

I look forward to your response.

Casandra
Appendix C: Informed Consent

Nurses’ perception of workaround use

Principal Investigator: Casandra Jordan, Masters of Science in Nursing student, Trinity Western University, Thesis Project.

Advisor committee members: Richard Sawatzky, PhD, RN: Trinity Western University School of Nursing, 7600 Glover Road, Langley, British Columbia, V2Y 1Y1, Canada.

Darlaine Jantzen, PhD (c), RN: Camosun College, 884 Leslie Drive, Victoria, British Columbia, V8X 2Y4.

Purpose: The purpose of this thesis project is to explore and describe the experiences nurses have with workarounds in their practice settings. Workarounds are “an alternative means for completing our goals, literally working around the block” (O’Connor, 2010, p.1.) I aim to investigate what factors a nurse considers before choosing to implement a workaround. What do nurses think about while choosing to use a workaround? And are there any distinct work environment factors that influence their choices? Ultimately I will seek to clarify why nurses chose a workaround, what factors precipitated the decision, and how nurses feel about the decision they made.

Procedures: If you choose to participate in this study, the principal researcher will request an interview of about one hour during which time you will be asked to participate in a discussion about your experiences with workarounds. The principal researcher will guide the interview with questions designed to assist with reflection and description about your experiences. You may be requested to participate in a second interview if needed to clarify or elaborate on topics identified during the initial interview. The second interview may last up to an hour in length as well. During the initial interview you will be asked if you would like to be contacted for a second discussion and the means by which you would like to be contacted. You will also be asked at this time if you are willing to participate in a check of the interpreted data to comment on the extent to which the results resonate with the information you provided. This would require you to review a summary of the results and answer a few standardized questions. This check will be sent to you via the medium of your choice (electronic or paper) and may take up to an hour to complete. During the interview process the principal researcher will ask if and how you would like to receive a copy.

Potential Risks and Discomforts: The principal researcher will be asking you about your nursing practice and the decisions you make as a nurse regarding workarounds and procedures. It may be uncomfortable to justify your nursing practice and this could make you feel guilty, distressed or experience other emotions. If at any time you feel uncomfortable, need to stop or take a break, please bring this to the principal researcher’s attention. The principal researcher
will try to make the interview process as comfortable as possible for you. You may withdraw at any time, and the principal researcher will do her best to ensure your comfort and ease.

**Potential Benefits to Participants and/or to Society:** During the reflection and description of your nursing practice, you may be able to describe a decision that has bothered you. This process could provide you with some clarity and encourage resolution of the matter.

**Confidentiality:** During the research project all information that is obtained in connection with this study will be kept confidential. This information will be disclosed only with your permission or as required by law. Both the College and Association of Registered Nurses of Alberta and the College of Licensed Practice Nurses of Alberta do not require the reporting of unsafe behavior that is disclosed during confidential interviews for the purpose of research. Therefore, all information discussed during the interviews will remain confidential. It is the belief of both colleges that discussion of the identified practice will lead to resolution through self-awareness.

All documents will have your identity removed and replaced with a code that is only known by the principal researcher. All paper data and electronic data will be stored in a secured location with the key and password kept by the principal researcher. The data will be kept for the duration of the research study plus 5 years. Your responses will be put in anonymous form and kept for the use of a possible secondary analysis or study. After 5 years, with the exception of the final research project, the raw and analyzed data will be appropriately disposed of.

A transcriptionist will transcribe the interview you participate in. The transcriptionist will sign a confidentiality agreement. The principal researcher may choose to use a quote or describe a situation you discussed within the final report. If it is believed that you can be identified by this particular situation or quote, you will be contacted separately for your permission to use the quote/described situation.

**Remuneration/Compensation:** The interviews will take place at a date, time and place you desire. You will not be required to travel by the principal researcher. There is no financial compensation for participating in the study. You will receive a thank you card and small gift for agreeing to participate in the study but will not be paid for your contribution. If you withdraw from the study you will still receive a thank you and small gift.

**Contact for information about the study:** If you have any questions or desire further information with respect to this study you may contact Casandra Jordan.

**Contact for concerns about the rights of research participants:** If you have any concerns about your treatment or rights as a research participant, you may contact Ms. Sue Funk in the Office of Research, Trinity Western University.
NURSES’ PERCEPTION OF WORKAROUND USE

Consent: Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without risk or concern. Upon withdrawal all information collected from you will be destroyed. You may identify at any time during the interview or after your wish to withdraw until the principal researcher is no longer able to extract your data from the other interviews. At this stage it would not be possible for the principal researcher to identify your responses and therefore remove them from the data. You may also, at any time, decline to participate in a second interview. Should you wish to withdraw from the project, please contact the principal researcher to express your concern.

Signatures

Your signature below indicates that you have had your questions about the study answered to your satisfaction and have received a copy of this consent form for your own records.

Your signature indicates that you consent to participate in this study.

___________________________________________            _______________________
Research Participant Signature                                                       Date
(or Parent or Guardian Signature)

_____________________________________________________________
Printed Name of the Research Participant (or Parent or Guardian) signing above

Appendix D: Demographic Sheet

Age: ______________________  Gender: ______________________

Primary place of work: ________________  Secondary: ________________

Education Level (please circle):  PhD  Masters  Degree  Diploma

Other: ______________________________

Years of Nursing Experience: ____

Address: _______________________________________________________________

Principal Researcher Use Only:

☐ Consent Signed

☐ Copy of consent given to participant

☐ Copy of consent with file

☐ Any Questions / Permission for follow up interview

☐ Willingness to Participate in Member Checking

Code Assigned: ___________________

Date interviewed: __________________
Appendix E: Transcriptionist Confidentiality

I, _______________ understand that all information collected as part of the study conducted by Casandra Jordan, principal researcher, titled Nurses’ Perceptions of Workaround Use will be kept confidential.

Project title: Nurses’ Perception of Workaround Use

Principal Investigator: Casandra Jordan

[ ] I understand that all the material I will be asked to record and/or transcribe is confidential.

[ ] I understand that the contents of the consent forms, interview tapes, sound files or interview notes can only be discussed with the researchers.

[ ] I will not keep any copies of the information nor allow third parties to access them.

[ ] I will delete all interviews and other relevant files from my computer after transcription.

___________________________________________            _______________________
Transcriptionist Signature                                                       Date

_____________________________________________________________
Printed Name of signing above

Signature of Principal Investigator: ___________________________
## Appendix F: Interview Guide

<table>
<thead>
<tr>
<th>Rapport/Opener</th>
<th>Can you describe a time at work when you have used an alternative work process that might not have been considered policy or best practice to get your work done/benefit your patient?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>What influenced your decision to use a workaround?</td>
</tr>
<tr>
<td></td>
<td>What were you thinking about when you were deciding to use the workaround? What were the important considerations/values in this situation? What was important to you during the situation you described?</td>
</tr>
<tr>
<td></td>
<td>How did you feel during this situation?</td>
</tr>
<tr>
<td></td>
<td>Why problem solve this time and not other times? What was unique to this patient or scenario?</td>
</tr>
<tr>
<td></td>
<td>What do you think about others being in the situation you were in, and making the same decision?</td>
</tr>
<tr>
<td>Closer</td>
<td>Is there anything else you would like to share with me about the topic?</td>
</tr>
</tbody>
</table>
Appendix G: TWU Ethics Approval

TRINITY WESTERN UNIVERSITY
Research Ethics Board (REB)
CERTIFICATE OF APPROVAL

Principal Investigator: Casandra Jordan
Department: Master of Science in Nursing
Supervisor (if student research): Dr. Richard Sawatzky
Co Investigators: None

Title: Nurses' Perception of Workaround Use

REB File No.: 12G11
Start Date: November 5, 2012
End Date: June 30, 2013
Approval Date: November 5, 2012

Certification

This is to certify that Trinity Western University Research Ethics Board (REB) has examined the research proposal and concludes that, in all respects, the proposed research meets appropriate standards of ethics as outlined by the "Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans".

Sue Funk, B.A. for Bill Badke, M.Th., M.L.S.
REB Coordinator REB Chair

This Certificate of Approval is valid for one year and may be renewed. The REB must be notified of all changes in protocol, procedures or consent forms. A final project form must be submitted upon completion.
Appendix H: GPRC Ethics Approval

September 26, 2012

Research Involving Human Subjects

<table>
<thead>
<tr>
<th>Ethics Reference Number</th>
<th>2012-1RHB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Title</td>
<td>Nurses' Perception of Workaround Use</td>
</tr>
<tr>
<td>Name of Researcher(s)</td>
<td>Cassandra Jordan</td>
</tr>
<tr>
<td>Name of Supervisor(s)</td>
<td>Richard Sawatzky</td>
</tr>
<tr>
<td>Date of RFB Meeting</td>
<td>Expedited September 25, 2012</td>
</tr>
</tbody>
</table>

Dear Cassandra Jordan

Thank you for submitting your application to Grande Prairie Regional College Research Ethics Board.

It is the decision of the board (expedited process) that your research proposal, as presented in the documents you have submitted, meets the minimum ethical requirements for research involving human subjects. Therefore, I am pleased to inform you that the board approved your application to conduct the above titled research as outlined by your submission.

Any changes that may occur in connection with this research that may have an impact on ethical consideration must be reported immediately to the Research Ethics Board.

This approval is valid for 3 years and is granted on the condition that the relevant principles in the GPRC Research and Ethics policy: Research Involving Humans (http://www.grprc.ae/downloads/documents/Research_and_Ethics_Policy_Research_Involving_Humans.pdf) are strictly observed.

Sincerely,

Chair of the GPRC Research Ethics Board OR Coordinator of GPRC Ethics Research Board
### Appendix I: Budget/Expenses

<table>
<thead>
<tr>
<th>Item</th>
<th>Individual Cost in $</th>
<th>Number</th>
<th>Total in $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview Refreshments</td>
<td>8.45</td>
<td>7</td>
<td>59.15</td>
</tr>
<tr>
<td>Gift Cards</td>
<td>1.25</td>
<td>7</td>
<td>8.75</td>
</tr>
<tr>
<td>Coffee Card Gift</td>
<td>10.00</td>
<td>7</td>
<td>70.00</td>
</tr>
<tr>
<td>Qualitative Software, i.e., NVivo</td>
<td>250.00</td>
<td>1</td>
<td>250.00</td>
</tr>
<tr>
<td>Transcriptionist Costs</td>
<td>100/interview</td>
<td>7</td>
<td>700.00</td>
</tr>
<tr>
<td>Travel Expenses</td>
<td>3.25</td>
<td>2</td>
<td>6.50</td>
</tr>
<tr>
<td>Professional Editing</td>
<td>675.00</td>
<td>1</td>
<td>675.00</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td></td>
<td><strong>1769.40</strong></td>
</tr>
</tbody>
</table>