

**A Case Study of a Medication Reconciliation Process: The Health Care Providers'
Perspective**

**A Dissertation Thesis Submitted
to the College of Graduate Studies and Research
in Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy in the
College of Nursing
University of Saskatchewan Saskatoon, SK**

**By
Catherine Ruth Jeffery**

PERMISSION TO USE

In presenting this dissertation in partial fulfillment of the requirements for a Postgraduate degree from the University of Saskatchewan, I agree that the Libraries of this University may make it freely available for inspection. I further agree that permission for copying this dissertation in any manner, in whole or in part, for scholarly purposes may be granted by the professor or professors who supervised my dissertation work, or, in their absence, by the Head of the Department, or the Dean of the College in which my dissertation work was done. It is understood that any copying, or publication, or use of this dissertation, or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of Saskatchewan for any scholarly use of any material in my dissertation.

Requests for permission to copy or make other use of material in this dissertation in whole or in part should be addressed to:

Dean of the College of Nursing
104 Clinic Place
University of Saskatchewan
Saskatoon, Saskatchewan
Canada
S7N 5E5

ABSTRACT

Purpose: The purpose of this exploratory qualitative study was to gain a better understanding of health care professionals' experiences and perspectives with the enactment of medication reconciliation, an intervention designed to promote safe, quality outcomes and continuity of care for patients who are transferred from urban acute care to urban long term care facilities.

Research Design: Intrinsic Embedded Single Case Study

Theoretical Framework: Normalization Process Theory and Extended Normalization Process Theory (General Theory of Implementation).

Sample/Setting: The study sample included 10 health care providers (two registered nurses, six pharmacists, and two physicians) who completed at least one step of the medication reconciliation process for patients transferred from an urban acute care unit to an urban long term care facility in a large health region in Saskatchewan, Canada.

Methods/Procedure: The data were collected using semi-structured interviews, which were digitally recorded and analyzed using thematic analysis to describe the medication reconciliation process from the study participants' perspective. In addition, documents used in the medication reconciliation process in the health region of study were reviewed and consultations were held with key health region staff involved with the medication reconciliation process to add to the description of the process in regard to continuity of care and patient safety.

Findings: There was overall consensus amongst the health care providers who participated in the study that medication reconciliation is an intervention that can improve medication safety and continuity of care in patient transitions through communication and the use of standardized forms. The study participants identified both benefits and challenges associated with the medication reconciliation process for patients transferred from urban acute care to urban long

term care in the health region of study. Participants agreed that patients benefited from improved communication about medication prescribing and administration and the continuity of care this promoted. In addition, the participants felt that health care providers benefited from the efficiency of using standardized forms and from improved communication with other health care providers involved in the patient's medication prescribing and administration. Major challenges identified by the study participants included lack of adequate notice of a patient transfer which increased the overall workload of hospital pharmacists. Acute care registered nurses in the health region of study were not involved in the medication reconciliation process for patients transferred to long term care, which could contribute to the increased workload experienced by hospital pharmacists. The timely acquisition of required physician signatures also provided a challenge. At the end of the data collection stage of the study, an initiative to allow for pharmacists to provide the final signature to the medication reconciliation forms was beginning to be implemented. This strategy may help to address some of the challenges associated with the medication reconciliation process.

Conclusions: In general, the health care providers who participated in the study identified that the medication reconciliation process for patients transferred from urban acute care to urban long term facilities is an intervention that can facilitate safe medication prescribing and administration and continuity of care. Challenges with the process were health system driven. A focus on addressing timely notification of patient transfers, the use of alternate strategies to obtain required signatures, and maximizing the use of all health care providers to complete the medication reconciliation process may produce general improvements to this patient safety strategy. The findings of this study have implications for practice, further research, and the

education of future health care professionals on the topic of medication reconciliation as an intervention that can facilitate safe medication prescribing and administration.

ACKNOWLEDGEMENTS

My thanks are extended to the participants in this study for their willingness to share their experiences with me. Thanks are also extended to the managers, directors, coordinators, and educators in acute and long term care facilities and in the community in the Saskatoon Health Region for their support of this work. Of particular note is the generosity of Cathy Coote, BSP, Crystal Richter, BSP, Cynthia Berry, BSP, Amy Wiebe, BSP, Vanessa Ripley, RN, and Jill Friedt, RN, for their assistance in launching this research.

I extend thanks to my supervisor Dr. Karen Semchuk and members of my committee Dr. Lois Berry, Dr. Elizabeth Domm, Dr. Laurie Hellsten, Dr. Maura MacPhee and committee chair Dr. Angela Bowen for their assistance and guidance during the design, execution, and completion of this research.

I am very fortunate to always have the un-wavering, unconditional love, support, and acceptance of my family throughout any of my personal, educational, and professional endeavors. Thank you to the three loves of my life - Bernie, Andrew, and Rosalind Knorr. Anything I have accomplished, I owe to you.

DEDICATION

I dedicate this dissertation in memory of my dear mother, Ruth B. Jeffery, RN, August 4, 1926 – June 15, 2005. She was the most professional registered nurse that I have ever had the privilege of knowing and I am grateful to her for being a role model and mentor. Her acknowledgement of my own successes as a registered nurse throughout my career meant the world to me. My mother was an important nursing leader, ahead of her time. I hope in some small way I have honored her by being a leader, mentor, and role model for the delivery of safe, quality, professional nursing care for the next generation of nurses in Saskatchewan.

TABLE OF CONTENTS

PERMISSION TO USE	i
ABSTRACT	ii
ACKNOWLEDGEMENTS	v
DEDICATION	vi
TABLE OF CONTENTS	vii
LIST OF FIGURES	xii
LIST OF TABLES	xii
CHAPTER ONE – BACKGROUND	
1.0 Introduction and Background	1
1.1 Relevance of the Study	3
1.2 Research Questions	7
CHAPTER TWO – LITERATURE REVIEW	
2.0 Current State of Knowledge	8
2.1 Continuity of Care at Transitions	9
2.2 Medication Reconciliation Contributes to Patient Safety	11
2.3 Research Design	14
2.4 Theoretical Framework	17
2.5 Summary	21
CHAPTER THREE – METHODOLOGY	
3.0 Methodological Approach	23
3.1 Health Region Documents	24
3.2 Key Health Region Experts	28
3.3 Health Region Medication Reconciliation Process	29

3.4	Setting –Research Context	30
3.5	Sample	30
3.5.1	Sampling techniques	31
3.5.2	Recruitment of participants	33
3.6	Data Collection	36
3.7	Data Analysis	38
3.8	Trustworthiness	41
3.9	Ethical and Operational Approvals and Considerations	42
3.10	Conclusion	43
CHAPTER FOUR – FINDINGS		
4.0	The Study Participants	45
4.1	Presentation of the Themes and Sub-themes	46
4.1.1	Overview	46
4.1.2	Themes and Sub-themes	48
4.1.2.1	Benefits of Medication Reconciliation	48
4.1.2.1.1	<i>Medication reconciliation is a legal requirement.</i>	49
4.1.2.1.2	<i>Medication reconciliation improves communication.</i>	51
4.1.2.1.3	<i>Medication reconciliation improves continuity of care.</i>	52
4.1.2.1.4	<i>Medication reconciliation contributes to patient safety.</i>	53

4.1.2.1.5	<i>Medication reconciliation promotes efficiencies.</i>	54
4.1.2.2	Challenges Associated with Medication Reconciliation	56
4.1.2.2.1	<i>Timing is important.</i>	56
4.1.2.2.2	<i>Variation exists.</i>	60
4.1.2.2.3	<i>Workload is affected.</i>	61
4.1.2.3	Resources	65
4.1.2.3.1	<i>Knowledge of the medication reconciliation process.</i>	65
4.1.2.3.2	<i>Dedicated resources.</i>	68
4.1.2.4	Optimizing Success	70
4.2	Summary	75
CHAPTER FIVE – DISCUSSION AND IMPLICATIONS		
5.0	Introduction	77
5.1	The Use of a Qualitative Case Study	78
5.1.1	Recruitment of Participants.	80
5.2	Discussion of the Findings and Study Themes	81
5.2.1	Health Care Providers Involved in the Medication Reconciliation Process.	81
5.2.1.1	<i>Registered nurses in acute care were absent from the process.</i>	82
5.2.1.2	<i>Medication reconciliation requires specialized knowledge.</i>	84

5.2.2	The Medication Reconciliation Process is Beneficial.	85
	<i>5.2.2.1 Benefits for patients.</i>	85
	<i>5.2.2.2 Benefits for health care providers.</i>	86
5.2.3	The Health System Provides the Challenges	87
	<i>5.2.3.1 Timing does not always meet the standard.</i>	87
	<i>5.2.3.2 Required physicians' signatures are difficult to obtain.</i>	88
5.2.4	A Consideration of the Findings Using the Normalization Process Theory and the Extended Normalization Process Theory (General Theory of Implementation)	89
	<i>5.2.4.1 Embedding the medication reconciliation process into practice.</i>	91
	<i>5.2.4.2 Capacity to complete the medication reconciliation process.</i>	93
	<i>5.2.4.3 Capability to incorporate medication reconciliation as standard practice.</i>	95
	<i>5.2.4.4 Summary</i>	96
5.3	Strengths and Limitations of the Study	97
	5.3.1 Strengths	98
	5.3.2 Limitations	99
5.4	Next Steps	100
	5.4.1 Dissemination	101
5.5	Implications and Conclusions	102
	5.5.1 Implications for Health Sciences Education	102

5.5.2	Implications for Practice	103
5.5.3	Implications for Further Research	104
5.6	Conclusion	105
REFERENCES		107
APPENDICES		
Appendix A Summary of Literature Review		117
Appendix B Consent Form		127
Appendix C Transcript Review and Consent for Release Letter		130
Appendix D Depiction of Medication Reconciliation Process Steps		132
Appendix E Health Care Provider Letter of Invitation		140
Appendix F Health Care Provider Poster Invitation to Participate		141
Appendix G Long Term Care Newsletter Health Care Provider Invitation		142
Appendix H Interview Guide		143

LIST OF FIGURES

Figure 1.	Embedded single case design	16
Figure 2.	Simplified medication reconciliation process	29

LIST OF TABLES

Table 1.	Summary of the components of the medication reconciliation process expressed in Donabedian's (1966) Structure-Process-Outcome Framework	12
Table 2.	Summary of Normalization Process Theory and Extended Normalization Process Theory (general theory of implementation)	18
Table 3.	Summary of data sources	24
Table 4.	Summary of themes and sub-themes	46
Table 5.	Summary of study findings linked to components of the theoretical framework	90

CHAPTER ONE – BACKGROUND

1.0 Introduction and Background

The focus on patient safety and the delivery of quality care is at the forefront in the current health care system at national, provincial, and regional levels (Canadian Nurses Association, 2012). One element of safe care involves the transition of patients, clients, and residents (from this point forward and for brevity referred to as patients) between different care venues and locations including hospitals, health centres, long term care facilities, and the community in urban and rural settings (Boling, 2009; Dusek, Pearce, Harripul & Lloyd, 2014; Magilvy & Congdon, 2000). Central to the safe transition of patients across health care settings is the enhancement of continuity of care across the continuum of care.

The transfer of patients between different venues of care in the health system presents the opportunity for discontinuity and fragmentation of care, both of which are safety issues (Boling, 2009; Dusek et al., 2014; Coleman, 2003). Standardized, timely, and accurate communication of care interventions by health care professionals can position the patient for the best possible outcomes and reduce error (Coleman, 2003). One aspect of care that has been identified as a potential area for discontinuity in care is accurate and appropriate medication prescribing and administration (Sullivan, Gleason, Rooney, Groszek & Barnard, 2005). Medication reconciliation (Med Rec) is one process that has been widely adopted for use to facilitate seamless care in the area of medication administration for patients who navigate different care venues in the health system (Institute for Safe Medication Practices Canada, March 2012; Sullivan et al., 2005).

Med Rec “is a process intended to ensure accurate and consistent communication of the patient’s medication information through transitions of care...touches every patient and most health care professionals through the entire continuum of care” (Institute for Safe Medication

Practices Canada, September 2010, p. 3). Literature about Med Rec is predominantly focused on the process itself and strategies to audit and track execution of the intervention as a best practice in medication prescribing and administration (Climente-Marti, Garcia-Manon, Artero-Mora & Jimenez-Torres, 2010; Institute for Safe Medication Practices Canada, 2012; Institute for Safe Medication Practices Canada, September 2010; Pippins, et al., 2008).

Over a thirty year health care career in acute care, community, and long term care settings, the researcher has had experience with health care colleagues who work against or do not engage in initiatives designed to contribute to safe, quality care. The paradox this presents is puzzling. It would seem intuitive that typically highly educated health care professionals would embrace evidence that supports interventions to enhance patient safety and quality of care provision (Grol, Berwick & Wensing, 2008; Rangachari, Rissing & Rethemeyer, 2013; Squires et al., 2013). It has been identified that non-compliance of health care professionals in initiatives designed to position the delivery of safe, quality care are poorly understood (Rangachari et al.; Squires et al., 2013). Eccles et al. (2006) suggested that the reasons behind health professionals' uptake of improvement initiatives that are supported by evidence are complex. Squires et al. (2013) echoed this and suggested that health care professionals' acceptance of improvement initiatives are influenced by context, barriers and facilitators, and ultimately expressed through their practice behavior.

There is discussion in empirical literature about the connection between Med Rec and patient safety, which contributes to medication prescribing and administration best practices (Gizzi, et al., 2010; Mueller, Cunningham Sponsler, Kripalani & Schnipper, 2012). Although there is anecdotal information about what health care providers think about the Med Rec process (C. Coote, personal communication February 2013), there is a limited amount of literature on the

subject of health care providers' experiences with the Med Rec process and their reasons for participating, or not, in this improvement strategy aimed at positioning patients to receive safe, quality care. Vogelsmeir, Pepper, Odera, and Weir's (2013) qualitative study provides some description of physicians', nurses', and pharmacists' perspectives of the Med Rec process. The study focused on "each profession's responsibility in the process" (Vogelsmeir, Pepper, Odera & Weir, 2013, p. 421) and did not include a focus on health care providers' experiences with and perspectives on completing the Med Rec process at the point of care for patients being transitioned between care settings.

Ultimately what makes or breaks the sustainability of quality initiatives is the enactment of the procedures required for those initiatives (Grol, Berwick & Wensing, 2008; Squires et al., 2013). It would be helpful to gain a better understanding of why health care providers participate, or not, in quality initiatives so that measures could be taken to position the success of initiatives aimed at the provision of safe, quality care.

The purpose of the study was to gain an understanding of the experiences and perspectives of health care providers who work with a quality improvement initiative such as the Med Rec process. The Med Rec process is intended to facilitate safe medication prescribing and administration for patients who are transferred from an acute care facility to a long term care facility in an urban setting.

1.1 Relevance of the Study

Medication errors are one of the most common patient safety errors (Poole, Chainakul, Pearson & Graham, 2006). Although it is challenging to determine the actual number of adverse events, such as medication errors, in Saskatchewan or in Canada for that matter, Baker et al. (2004) conducted a study to determine the incidence of adverse events in Canadian hospitals

In their study, a random sample of adult patient charts from a random selection of teaching and large and small community hospitals in five provinces (British Columbia, Alberta, Ontario, Quebec, and Nova Scotia) were reviewed (Baker et al, 2004). Baker et al. reported an estimated 7.5% of 100 patients admitted to hospital had at least one documented adverse event in their 2004 Canadian Adverse Events Study (Baker et al., 2004). Adverse events included, but were not specific to, medication errors. In their discussion, Baker et al. (2004) identified that although further research on the incidence of each type of adverse event was needed, measures to improve medication safety were being introduced in clinical settings. Med Rec is recognized as an intervention that can reduce the incidence of medication errors and medication discrepancies for patients at points of health care transition (Chhabra, et al., 2010; Climente-Marti, Garcia-Manon, Artero-Mora & Jimenez-Torres, 2010; Poole, Chainakul, Pearson & Graham; Steeb & Webster, 2012).

The implementation of Med Rec is a provincial Ministry of Health medication safety initiative in the province in which this study was conducted (Government of Saskatchewan Ministry of Health 2012-13 Annual Report). The Saskatchewan Ministry of Health has identified that “Medication reconciliation is a formal process in which healthcare providers work together with patients, families and care providers to ensure accurate and comprehensive medication information is communicated consistently across transitions of care” (Government of Saskatchewan Ministry of Health 2012-13 Annual Report). Health regions in the province, including the health region of study, are required to implement the Med Rec process through a staged strategy for all patients across transitions of care in the health system (C. Coote, personal communication, November 2012; February 2013). Prior to the implementation of the Med Rec process, a standardized approach to the assessment of medication histories, documentation, and

communication regarding medication prescribing and administration was not routinely in place across Canada (Accreditation Canada, Canadian Institute for Health Information, Canadian Patient Safety Institute & Institute for Safe Practice Canada, 2012).

Implementation of the Med Rec process in the province focused initially on patients who were admitted to acute care settings, then extended to the transition of patients from acute care to long term care, with future implementation for all patient transfers and discharges to any care setting or to the patient's self-care (C. Coote, personal communication, November 2012; February 2013). There are similar Med Rec process implementation strategies across Canadian provinces (Accreditation Canada, Canadian Institute for Health Information, Canadian Patient Safety Institute & Institute for Safe Practice Canada, 2012). Implementation of the Med Rec process was added to the list of required organizational practices by Accreditation Canada in 2006 (Accreditation Canada, Canadian Institute for Health Information, Canadian Patient Safety Institute & Institute for Safe Practice Canada, 2012). This standard is applied and assessed for in health jurisdictions that undergo application for accreditation status in Canada. The health region of study implemented Med Rec for patients who are admitted to acute care in 2007 and, at the time of the study, had implemented Med Rec for patients being transferred from urban acute care settings to long term care settings, both urban and rural, in the health region of study (C. Coote, C. Richter, C. Berry and A. Wiebe, personal communications, February 4, 2013).

All health regions are expected to continually audit and report to the Ministry of Health their compliance rates with the completion of Med Rec at each stage of implementation of the Med Rec process (C. Coote, personal communication, November 2012; February 2013). At the time of this research the health region of study completed audits of the rates of completion of Med Rec for patients admitted to acute care and for those transferred from acute care to long

term care (C. Coote, personal communication, November 2012; February 2013). Audit results were reported to the Ministry of Health as required. Audit results for Med Rec completion for patients being transferred from urban acute care units to urban long term care facilities in the health region of study were made available to the researcher by the Kaizan Promotion Office, Saskatoon Health Region and the Saskatchewan Ministry of Health-Patient Safety Unit. Audit results for health region reports submitted between April 2013 – March 2015 revealed Med Rec completion compliance rates of roughly 83% to 97%. These rates do not reflect the 100% completion compliance rate that the health region has targeted (C. Coote, personal communication November 2012; February 2013). In addition to continually monitoring compliance with the completion of the Med Rec process for patients transitioning from acute care to long term care, there was an interest in the health region to get a better understanding of health care providers' experiences with and perspectives on the Med Rec process (C. Coote, personal communication November 2012; February 2013). Having a better understanding of the experiences of health care providers who complete the Med Rec process could be used to assist with the continual improvement of the Med Rec process in the health region of study (C. Coote, personal communication, November 2012; February 2013). This study focused on the Med Rec process for patients as they transitioned from urban acute care to urban long term care settings in the health region of study.

The findings of the study will add to the body of knowledge about the Med Rec process from the perspective of health care providers who enact the process for patients who are transferred between urban acute care and urban long term care facilities. The findings will contribute to recommendations that can be applied at the point of care to facilitate safe patient transfers when patients are transferred between different locations of care (Coleman, et al.,

2002). In addition, the study will provide increased knowledge of the contribution of health care providers to the quality improvement initiative known as the Med Rec process, which through the use of a formalized complete and accurate information summary has the potential to reduce errors that lead to adverse events thereby reducing harm to patients transferred between acute care and long term care settings (Institute for Safe Medication Practices Canada, March 2012). Finally, the researcher proposes that the results of the study may shed light on factors that facilitate or provide barriers to the enactment of the Med Rec process by health care providers (Luck, Jackson & Usher, 2006; Stake, 2005; Yin, 2009).

1.2 Research Questions

1. What are the Med Rec experiences of health care providers who are involved with the Med Rec process for the transition of patients from urban acute care facilities to urban long term care facilities?
2. What are the views of health care providers involved with Med Rec regarding how they use the Med Rec process to contribute to safe care transitions for patients who are transferred from urban acute care to urban long term care facilities?
3. What do health care providers involved with Med Rec see as factors that facilitate or provide barriers to the enactment of the Med Rec process?

CHAPTER TWO – LITERATURE REVIEW

2.0 Current State of Knowledge

The researcher conducted a review of relevant literature to identify commonalities in findings and methodology and also to identify any gaps in currently held knowledge in the area of study. The literature review informed the research questions and study design prior to the commencement of the study and continued throughout the period of data collection and analysis, and interpretation of the findings.

Search terms that were used included transitions, patient safety, medication reconciliation, medication safety, and continuity of care. The databases of CINAHL (2000 - 2016) and Medline (2000 - 2016) were accessed in the search for primary articles that included one or more of the search terms. Additional inclusion criteria included the date ranges of the years 2000 to 2016, and articles that were provided in English. A combination of the search terminology yielded articles that reported predominantly quantitative or evaluation information. Thirty three articles that met the inclusion criteria and that were relevant to the topic of the study, were selected and reviewed. A summarized review is provided in Appendix A. Very few articles reported qualitative information on the search terms identified. The abstract of each article was reviewed for appropriateness to the study topic area and included to the literature review if the article appropriate. The researcher also targeted the Journal of Qualitative Research and the Journal of Quality Improvement for any additional articles that could inform the study topic.

In addition to articles providing the results of research or evaluation, systematic reviews and grey literature articles, such as related material from professional and health associations and

public reports, were included in the search results. This material is also summarized in Appendix A.

The researcher conducted a review of current literature prior to the commencement of the study. The literature review was updated during the writing of the discussion section of this document. In addition to the search for related literature, the researcher also conducted a search of websites appropriate to the topic of study to find related health care professional or Canadian standards and guidelines that would provide information to assist with analysis of the research findings.

2.1 Continuity of Care at Transitions

Health care delivery systems that standardize processes for consistent and timely delivery of information to and between care teams position the patient for optimal outcomes at points of transition by enhancing continuity of care (Boling, 2009; Clancy, 2006; Coleman, 2003; Naylor, 2012). Review of empirical literature focused on evaluation of intervention strategies that involve team approaches to improve continuity of care for patients revealed that the combination of care transitions and care needs are both so complex that multiple strategies must be instituted to enhance safe, quality care (Arora & Farnan, 2008; Hickman, Newton, Halcomb, Chang, & Davidson, 2007). Complexity of care needs in itself can influence an overall care delivery model for the safe transition of patients of all ages (Naylor, 2012).

A team approach to quality improvement activities can enhance safety and continuity of care (Annis, 2002; Magilvy & Congdon, 2000). Quality improvement initiatives are designed to enhance patient outcomes by improving clinical care delivery (Davidoff, 2009). The success, or not, of an improvement initiative rests on the systematic application of the process of improvement and the behaviour of the health care providers who enact the activities of the

initiative (Davidoff, 2009). Quality improvement initiatives have social and behavioral components (Davidoff, 2009) and “are complex social interventions, for which high levels of variance in context, content and application are often inherent” (Walshe, 2007, p. 57). Health care professionals’ behaviours are an important element to support change required to implement and sustain quality improvement activities and initiatives (Grol, Berwick & Wensing, 2008).

The nursing and interdisciplinary research literature addresses the importance of care interventions that promote safe patient care (Annis, 2002; Arora & Farnan, 2008; Boling, 2009; Clancy, 2006; Coleman, 2003; Hickman, et al., 2007; Magilvy & Congdon, 2000). Because of health system pressures it is common for patients to be transferred between facilities, within facilities, to various different bed locations on a clinical unit, and then to the community or long term care (Arora & Farnan, 2008). Transferring of patients is one aspect of the complexity of the current health system; add to this the complexities of each individual patient and the process of transfer can provide an opportunity for discontinuity of care (Coleman, 2003). When a patient receives care in different care settings from several health care providers, there is a risk for discontinuity or fragmentation of their care if measures to enhance continuity, such as standardized communication, are not in place (Parry et al., 2003). Medication errors can be one result of discontinuity or fragmentation of care (Coleman, 2003; Parry et al., 2003).

Continuity of care results from activities or interventions that facilitate seamless care, which positions a patient for the best possible outcomes from safety and quality perspectives (Coleman, 2003). Transfer of a patient has been identified as an activity that could pose a threat to safe care (Coleman, 2003). In the broadest sense, “continuity of care” provides an overall construct for the concept of “safe care transition”. If we consider safety as a feature of quality care, then the presence of safe outcomes point to quality and both link to continuity of care for

the patient (Grol, Berwick & Wensing, 2008). The engagement of health care providers in activities implemented to position the patient for safe transitions between care venues can then contribute to the overall continuity of care for the patient.

2.2 Medication Reconciliation Contributes to Medication Safety

The Med Rec process consists of a sequence of activities that are completed by health care providers, such as physicians, pharmacists, pharmacy technicians, and nurses, along a timeline (Institute for Safe Medication Practices Canada, 2012). The Institute for Safe Medication Practices in Canada (2012) has identified that the Med Rec process should be completed by health care providers at all interfaces of care, which would include admission to, discharge from, and transfers between care settings. The completion of the Med Rec process is supported by factors in the care setting and the activities of health care providers to ultimately improve medication safety for patients at points of transition. An outline of the components of the Med Rec process as found in the literature can be illustrated using Donabedian's (1966) model which looks at the relationship between structure, process, and outcomes for health care practice. This model identifies that factors within the health care setting (structure) relate to the activities of health care providers (process), which then influences the outcome of the intervention which can be measured (Donabedian, 1966).

Table 1 provides a summary of the components of the Med Rec process for patient transitions (Chhabra, et al., 2012; Institute for Safe Medication Practices Canada, 2012; Kwan, Lo, Sampson & Shojania, 2013; Laugaland, Aase & Barach, 2012; Moore, Wisnivesky, Williams & McGinn, 2003; Paparella, 2006; Pincus, 2013; Poole, Chainakul, Pearson & Graham, 2006; Steeb & Webster, 2012) using Donabedian's (1966) model.

Table 1. Summary of the components of the medication reconciliation process expressed in Donabedian's (1966) Structure-Process-Outcome Framework

Structure →	Process →	Outcomes
Settings or factors within the health care delivery system	Health caregiver activities and behaviors	Measurable results of care
<p>Policy and procedure outlines the process and health care provider roles.</p> <p>Access to comprehensive list of patient medications</p> <p>Forms for documentation.</p> <p>Patients and family members provide a source of information.</p>	<p>Completion of the following activities by a combination of physicians, pharmacists, pharmacy technicians, and nurses:</p> <ul style="list-style-type: none"> • <i>Verification</i>: collection of the best possible medication history of all the patient's current medications including prescription medication, non-prescription medication, supplements, herbal and alternative therapies. • <i>Clarification</i>: review of information that ensures all medications and dosages are appropriate. • <i>Reconciliation</i>: health care providers investigate, communicate, and document changes relevant to medication orders. 	<p>Accurate, comprehensive, medication information communicated consistently across transitions of care.</p> <p>The steps of Med Rec are completed at key transfer points across the care continuum:</p> <ul style="list-style-type: none"> • Admission • Status change • Patient transfer within or between facilities or health care provider teams • Discharge

As will be discussed later in Chapter 3, there is congruence between the Med Rec process for patients being transferred from acute care to long term care in the health region of study (Appendix D) and the summary of the components of the Med Rec process outlined in Table 1.

Medication prescribing and administration is a care intervention that requires careful and systematic review to prevent errors, omissions, and critical incidents when patients are transferred between care settings by health care providers (Chhabra, et al., 2012; Kwan, Lo,

Sampson & Shojania, 2013; Laugaland, Aase & Barach, 2012; Moore, Wisnivesky, Williams & McGinn, 2003; Poole, Chainakul, Pearson & Graham, 2006; Steeb & Webster, 2012).

Med Rec is identified as an intervention that facilitates safe medication prescribing and administration during care transitions through improved communication (Barnsteiner, 2005; Chhabra et al., 2012; Fitzgibbon, Lorenz & Lach, 2013; Paparella, 2006). Med Rec is also identified as a medication safety intervention that can be utilized at any point of care including on admission to and discharge from acute care, long term care, and community care settings (Chhabra et al., 2012; Kwan et al., 2013; Paparella, 2006; Pincus, 2013; Poole et al., 2006), to promote “preventable error at transitional points of care” (Barnsteiner, 2005, p. 31).

Because of their education and clinical focus, pharmacists are identified as key health care providers to be involved in the accurate implementation of the Med Rec process (Chhabra et al., 2012; Kaboli, Hoth, McClimon & Schnipper, 2006; Knez, Suskovic, Rezonja & Laaksonen, 2011; Kwan et al., 2013; Mueller et al., 2012; Steeb & Webster, 2012; Strunk, Matson & Steinke, 2008). Although this can place an extra workload on pharmacists (Fitzgibbons et al., 2013; Mueller et al., 2012), other health care providers such as physicians and nurses can also be involved in implementation of the Med Rec process (Climente-Marti et al., 2010; Knisely, Bartlett Ellis & Carpenter, 2015). It is identified, however, that health care providers require knowledge and skill, such as the ability to carry out a comprehensive medication assessment, to complete the Med Rec process (Kaboli et al., 2006; Pincus, 2013; Strunk et al., 2008; Varkey et al., 2007). Fitzgibbon et al. (2013) and Pincus (2013) focused particularly on the importance of nurses having the knowledge and skill required to complete an accurate and comprehensive Med Rec process. The Saskatchewan Registered Nurses Association (2015) which is the regulatory body for all RNs in the province of study, has identified that RNs do in fact have the knowledge

and skill to be competent in the completion of the steps of the Med Rec process. Involvement in the Med Rec process by RNs is identified as an important intervention to facilitate medication safety (Saskatchewan Registered Nurses Association, 2015).

There is support for a multi-disciplinary approach to the completion of the Med Rec process. Varkey et al. (2007) reported a reduction in medication discrepancies when a multi-disciplinary approach to Med Rec was used during acute care admission and discharge. Steeb and Webster (2012) identified that collaboration among health care providers was important to the coordination of a successful Med Rec program. The combined efforts of the health care team are seen to be important to the accurate implementation of the Med Rec process as an intervention to facilitate safe medication prescribing and administration at points of admission, discharge, and transition in the health care system (Poole et al., 2006; Steeb & Webster, 2012).

The discussion about the importance of a multi-disciplinary approach to Med Rec was extended to successful implementation of the Med Rec process (Sanchez, Sethi, Santos & Bookvar, 2014; Van Sluisveld, Zegers, Natsch & Wollersheim, 2012). A successful Med Rec program involves the input of the multi-disciplinary health care team and provides role clarity for each type of professional on the team (Sanchez et al., 2014; Van Sluisveld et al., 2012; Vogelsmeier et al., 2013).

2.3 Research Design

Several qualitative methods are currently used in the field of health care research (Morse, 2012). This study of the Med Rec process for patients transferred from acute care to long term care is well positioned for an exploratory qualitative case study approach. There is limited information about the perspectives and experiences of health care providers who implement the Med Rec process. A qualitative approach is useful in an exploratory, inductive study such as this

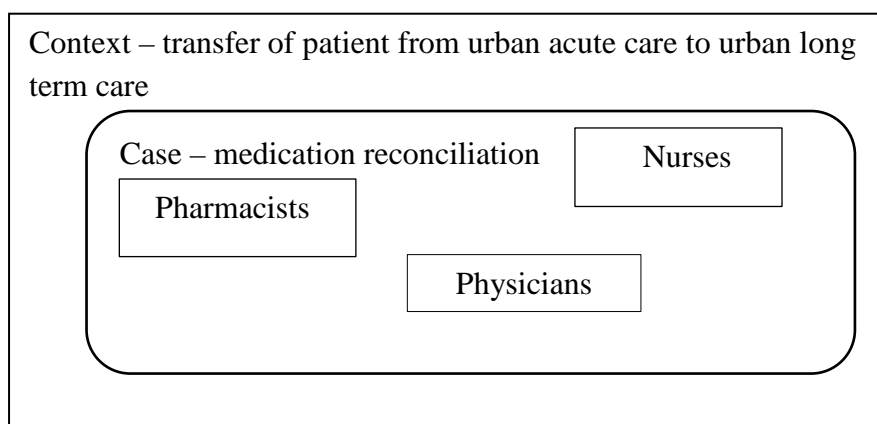
to learn from the specific observations of health care providers so that a broader understanding of their perspectives and experiences can be better understood (Polit & Beck, 2012; Richards & Morse, 2007). An exploratory qualitative case study approach provides the opportunity to use several sources of data (Boblin, Ireland, Kirkpatrick & Robertson, 2013; Yin, 2009; Zucker, 2009) such as the complex and simplified mediation reconciliation processes as shown in Appendix D (p. 131 of this document) and Figure 2 (p. 29 of this document), the results of the quantitative process audits conducted by the health region, and the words of the health care providers who will describe their experiences with the Med Rec process. The use of multiple data sources increases the likelihood of garnering a holistic description of the case being studied (Stake, 2005; Yin, 2009).

The case study approach “is defined by interest in an individual case.” (Stake, 2005, p. 443) and optimizes what can be learned about a single case (Stake, 2005). Study of the Med Rec process as a whole lends itself to consideration as a single case. The purpose of studying Med Rec, as a case, is to develop an understanding of what is perceived to be the case’s issues, contexts, and interpretations (Luck et al., 2005). In other words, Med Rec is chosen as a case in order to build understanding of health care providers’ interpretations of the role of Med Rec in promoting safety for their patients. Because the implementation of the Med Rec process requires collaboration by several different health care providers, the Med Rec process may be treated as a single case (Stake, 2005; Yin, 2009), and more specifically, as an intrinsic case because the overall goal and focus of the proposed research is to have a better understanding of the Med Rec process in and of itself (Stake, 2005; Yin, 2009). Although the Med Rec process is directed at patients who are transferred between acute care and long term care facilities, the focus of the case study is on the Med Rec process at time of patient transfer as perceived by the health care

providers involved in implementing the Med Rec and not on the experience of the patients being transferred. For this reason, patients were not included as an embedded group of study within this case study of Med Rec.

The intrinsic embedded single case study design allows for the exploratory study of the Med Rec process for patients transferred from acute care to long term care through the experiences and perspectives of the health care providers who complete steps of the Med Rec process. The intrinsic embedded single case study is well suited to shed light on the topic of this study. The Med Rec process used for transfer of patients from acute care to long term care has been developed and is currently in use in health region settings of the proposed study and there are a limited number of health care providers and care venues being investigated (Yin 2009). This facilitates the opportunity for the development of in depth knowledge about the process including health care providers' perceptions of the process. In other words, the Med Rec process, which is the subject of the research, has the components: context, boundaries, and limited numbers of individuals and institutions, which are conducive to a case study approach (Polit & Beck, 2012; Yin 2009). Figure 1 presents a graphic representation of the approach.

Figure 1. Embedded single case design



Limitations of using a case study design include the potential for a lack of objectivity and findings that may not be transferable to other contexts (Polit & Beck, 2012; Richards & Morse, 2007). For this study, the Med Rec process for patients transferred from acute care to long term care provides the boundary of the case. The health care providers who implement the Med Rec process provide a description of their perspectives and experiences. The findings are related to health care providers' experiences of the Med Rec process within the boundary of patient transfer between acute care and long term care. The findings will be specific to the case study of the Med Rec process for patients who are transferred from acute care to long term care. Strategies used in this study to address these challenges are discussed in the Trustworthiness section (p. 39) of this paper.

2.4 Theoretical Framework

The incorporation of what is known to be “best practice” into interventions that are designed to improve health care requires support. Shojania and Grimshaw (2005) suggested that some barriers to the embedding of best practice interventions can be provided by factors in the health system (which they refer to as “structural,” p. 142), which could include a lack of the tools needed to implement the improvement activity. Another barrier could be provided by the health care professionals themselves who implement interventions meant to improve clinical processes and outcomes. This could include the knowledge, skills, attitudes, or beliefs of the health care providers enacting a clinical improvement intervention (Shojania & Grimshaw, 2005).

In the context of the research that was conducted, Med Rec was regarded as a health care improvement intervention that presents a complex social process enacted by health care providers (May et al., 2007). The enactment of the steps of Med Rec requires engagement of a range of providers with their different perspectives within the complexities of a health system.

This combination can be explained and understood using the theoretical framework of Normalization Process Theory (May & Finch, 2009; May et al., 2007; McEvoy et al., 2014) and the Extended Normalization Process Theory also known as a general theory of implementation (May, 2013). Table 2 provides a summary of the theoretical framework of Normalization Process Theory and the Extended Normalization Process Theory (general theory of implementation) (May & Finch, 2009; May et al., 2007; McEvoy et al., 2014).

Table 2. Summary of Normalization Process Theory and Extended Normalization Process Theory (general theory of implementation)

Theoretical Framework	What the Theory Proposes
<u>Normalization Process Theory</u> Theory Components <i>Mechanisms that influence the embedding of a complex intervention:</i> <ul style="list-style-type: none"> • <i>Coherence</i> • <i>Cognitive participation</i> • <i>Collective action</i> • <i>Reflexive monitoring</i> 	Implementation and sustainability of complex interventions become embedded by the individual and the collective work of people.
↓	↓
<u>Extended Normalization Process Theory</u> (general theory of implementation)	Broadens and adds to the Normalization Process Theory by offering a more comprehensive understanding of the implementation and sustainability of new interventions.
Theory Components <i>Adding to the mechanisms of Normalization Process theory, constructs include:</i> <ul style="list-style-type: none"> • <i>Potential - the ability of and support provided to health care providers to enact and be involved in an intervention.</i> • <i>Capacity - role expectation of health care providers, their knowledge of an intervention and system supports such as time and materials.</i> • <i>Capability - how the intervention is integrated as a process from a work perspective.</i> • <i>Contribution - what health care providers actually do to implement an intervention.</i> 	

Normalization Process Theory “is a middle range theory...that provides an explanatory framework for investigating the routine embedding of material practice in their social contexts” (May & Finch, 2009, p. 536). Using theory from the social sciences as a foundation (May, 2013; May & Finch, 2009) Normalization Process Theory concerns the implementation and sustainability of complex interventions into routine practice (May & Finch, 2009). Within Normalization Process Theory it is proposed that interventions (referred to as material practices) “become routinely embedded in social contexts as the results of people working, individually and collectively, to implement them” (May & Finch, 2009, p. 540). Four mechanisms relating to the people who implement an intervention – coherence, cognitive participation, collective action, and reflexive monitoring – can influence how it is operationalized (May & Finch, 2009; Murray et al., 2010). In other words, Normalization Process Theory suggests that with complex processes such as Med Rec for patients who are transferred from acute care to long term care, the health care providers involved consider whether or not the intervention makes sense clinically (coherence), complete steps of the process to get the work done (cognitive participation, collective action), and consider whether or not the Med Rec process provides a benefit to their patients as they are moved to another venue of care (reflexive monitoring) (Murray et al., 2010). In addition, Normalization Process Theory suggests that engagement of the health care providers to complete the work of an intervention along with the determination of the costs of the work overall also influence whether or not a complex intervention such as the Med Rec process is embedded into the practices of health care providers (Murray et al., 2010).

The four mechanisms suggested by Normalization Process Theory that influence the embedding of a complex clinical intervention can also be affected positively or negatively by factors internal or external to the context, in which the intervention is being introduced to (May

& Finch, 2009). An additional component of Normalization Process Theory addresses the outcome and sustainability of an intervention or rather the success (or not) with which the change in practice has been fully incorporated into ongoing practice (May & Finch, 2009). It makes sense to consider the impact of other factors in the health system on the enactment of the Med Rec process as there could be factors outside the health care providers that exert influence.

Normalization Process Theory provides constructs that are specific in explaining factors that facilitate or delay the operationalization of complex interventions and begins to outline a framework for understanding and explaining the behavior of those involved in the change and sustainability of the change (May & Finch, 2009; May et al., 2009). During the development of the Normalization Process Theory, components reflective of the social processes involved with the implementation and sustainability of a complex intervention were identified to include as factors, the people who engage in the intervention and the system within which the intervention is enacted (May & Finch, 2009). This approach makes sense within the scope of the research that was conducted because the Med Rec intervention is enacted within the context of health care facilities by several health care providers who have to engage in the process for successful patient outcomes.

The Extended Normalization Process Theory (general theory of implementation), has additional constructs that offer a more comprehensive understanding of the implementation and sustainability of new interventions (May, 2013). Along with being informed by socio-psychological constructs to explain the mechanisms behind the behaviour of people who enact and embed a new intervention into practice, this general theory of implementation includes mechanisms from Normalization Process Theory in addition to the following constructs:

- potential - the ability of and support provided to health care providers to enact and be involved in an intervention;
- capacity - role expectation of health care providers, their knowledge of an intervention and system supports such as time and materials;
- capability - how the intervention is integrated as a process from a work perspective;
- and contribution - what health care providers actually do to implement an intervention.

The general theory of implementation considers the four mechanisms of Normalization Process Theory described above with components from socio-psychological theory in the areas of social structure, change, and cognitive processes to “offer a more comprehensive explanation of implementation processes” (May, 2013, p. 2). In other words, Normalization Process Theory and the Extended Normalization Process Theory (general theory of implementation) provide a comprehensive framework to help to shed light on what is behind the practice behavior of health care professionals who are involved in or expected to be involved in a complex clinical intervention such as the Med Rec process, which is implemented to enhance patient safety and continuity of quality care, for patients who are transferred from acute care to long term care.

2.5 Summary

Patient safety and the delivery of quality care remains a priority in health care. The transfer of patients between different venues of care in the health system presents the opportunity for discontinuity and fragmentation of care, both of which are patient safety issues. Standardized, timely, and accurate communication of care interventions by health care professionals can position the patient for the best possible outcomes and reduction in error.

Medication prescribing and administration is a care intervention that requires careful and systematic review to prevent errors, omissions, and critical incidents when patients are transferred by health care providers and between locations of care. Med Rec is an intervention that can assist with the continuity of care with medication prescribing and administration at points of transition.

Current literature on the topic of Med Rec is predominantly quantitative. There is a limited amount of literature on the perspectives of health care providers on the Med Rec process. More information that provides a description of health care providers' perspectives and experiences with Med Rec could help to understand why or why not they incorporate Med Rec as a standard practice. Having a better understanding of the reasons health care providers do or do not incorporate best practice could serve to inform the implementation of strategies that position people who receive care for safe, quality outcomes.

The Med Rec process is complex. It includes several steps that need to be completed; steps are completed by different health care providers; and, as in this study, it crosses locations as patients are transitioned. The qualitative case study is well suited to assist with the study of health care providers' perspectives and experiences with the Med Rec process for patients transferred from acute care units to long term care facilities. A qualitative approach offers the opportunity to provide a narrative description of the participants' experiences and perspective. The qualitative case study also offers data collection techniques that capture health care providers' perspective and experiences with the addition of review of key related documents and materials, and consultations with health region staff key to the design and implementation of the Med Rec process.

CHAPTER THREE – METHODOLOGY

3.0 Methodological Approach

An intrinsic embedded single case study design was used to study health care providers' experiences and perspectives with the enactment of the Med Rec process for patients transferred between acute care and long term care facilities. This approach facilitated a review of the pieces of the process – each health care provider as an embedded element, the process itself, and supporting documents. A picture representation of the methodological approach can be found in Figure 1 (p. 16) in this document).

In order to gain as full an understanding as possible of the Med Rec process and health care providers' perspectives on the complexity of the Med Rec process, data collection strategies included accessing health region documents and personal interviews of experts of the process, leaders in all the clinical areas where the process was enacted, and health care providers who were involved in at least one step of the process.

Table 3 provides a summary of data sources for this research. A more detailed discussion of the data sources used in this research is presented following Table 3.

Table 3. Summary of data sources

Health care providers who were involved in at least one step of the Med Rec process	Health region experts on the Med Rec process	Health region documents
<p>10 health care provider interviews:</p> <ul style="list-style-type: none"> • Two community/acute care physicians • Two RNs from long term care • Six pharmacists – Three acute care, three community 	<p>Consulted but not interviewed using a standard set of questions:</p> <ul style="list-style-type: none"> • Pharmacy manager • Med Rec Pharmacist Lead • Acute care Pharmacy manager • Long term care managers • Acute care managers • Manager Client Patient Access Service 	<ul style="list-style-type: none"> • Med Rec process for patients transferred from urban acute care to long term care. • Med Rec documents used when patients transferred. • Newsletter updates regarding status of implementation of the Med Rec process. • Med Rec process teaching material for health care providers.

3.1 Health Region Documents

The Med Rec process under evaluation was developed by the health region in the study area through the use of quality improvement tools including the plan-do-study-act (PDSA) cycle, which is used to test and document a change for the purpose of developing a process that facilitates a desired outcome (Institute for Healthcare Improvement, 2013). The Med Rec process focus of the study is comprised of several distinct but linked procedures and involves a number of different health care providers across acute care, community, and long term care sites.

The Med Rec process for patients transferred from acute care to long term care shows the point at which each health care provider is involved with steps of the process. Health care providers include client care coordinators, nurses in the acute care and long term care settings, pharmacists and physicians in the acute care and community care settings, and patients and their families who are the focus of the transition from acute care to long term care. Different means of

communication (fax, phone, email, and electronic medication record for long term care facilities that use this method of communication) are used when a patient is transferred from acute care to long term care along with standardized documents that are used to reflect transition information for each patient transferred from an acute care facility to a long term care facility.

The researcher summarized the steps of the health region's Med Rec process in Appendix D. The outline illustrates the connection between the program activities and anticipated outcomes if the activities are executed as designed. In addition, Appendix D outlines the sequence of steps of the Med Rec process as each step logically precedes the next (Goeschel, Weiss & Pronovost, 2012). The activities that comprise the steps help achieve the desired outcomes of having the right medication orders in place and communication of medication allergy or intolerance for patients transferred from acute care to long term care. The sequence of events along with the identified activities represents the Med Rec process principles of change (Goeschel et al., 2012; Patton, 2008). Depicting the Med Rec process in this format can be used to identify points in time for evaluation and data sources (Patton).

As was mentioned earlier, the Med Rec process for patients being transferred from acute care to long term care in the health region of study shows congruence (Appendix D) with the summary of the components of the Med Rec process outlined in Table 1 on page 12 of this document. In keeping with the components attributed to the structure-process-outcomes framework (Donabedian, 1966), the documentation on the Med Rec process in the health region of study provides detail of the steps that are completed for transfer points across the care continuum, specifically patient transfers between acute care and long term care and the health care provider teams in those two venues of care.

The health region of study has developed procedures and standardized forms specifically for the Med Rec process that is completed for patients who are transferred from acute care to long term care. Health care providers in the health region of study have access to a patient's list of medications electronically through the provincial Pharmaceutical Information Program (PIP) (<http://www.ehealthsask.ca/services/pip/Pages/pip.aspx>). The medication list reflects currently known medications that have been prescribed and may or may not include medications that do not require a prescription, such as vitamins or non-narcotic pain medication. As with the process outlined in Table 1, it remains up to the health care provider in the health region of study to verify, clarify, and reconcile the comprehensive list of medications that are being taken by a patient. The health region of study conducts audits of the Med Rec process for patients transferred from acute care to long term care to measure the outcomes of the health care providers' activities as they complete the steps of the Med Rec process. The audit results are used to inform further improvements to the Med Rec process (C. Coote, personal communication, November 2012; February 2013).

The large health region in which the research was conducted uses patient records (for specific demographic and pertinent clinical information) and document analysis (such as those associated with medication administration and reconciliation) to conduct ongoing quantitative audits to determine the alignment with provincially targeted priorities for the Med Rec process for patients transferred from acute to long term care (C. Coote, personal communication, November 2012; February 2013). Quantitative audit data collection reflects the health region's success in implementing various steps of the Med Rec process. Data collected includes the date of notification of the patient transfers, the names and locations of the transferring acute care unit and receiving long term care facility to which the patient was transferred, the date of transfer,

and whether or not the various Med Rec process steps were completed within the expected timelines. Audit results (Kaizan Promotion Office, Saskatoon Health Region; Saskatchewan Ministry of Health-Patient Safety Unit) and information shared by key health region personnel revealed that the health region was not meeting its target of 100% compliance with the completion of the Med Rec process for patients transferred from acute care to long term care (C. Coote, personal communication, November 2012; February 2013).

To complement the health region's audit of the Med Rec process, the researcher conducted a qualitative exploration of the experiences of health care providers who complete or participate in at least one step of the Med Rec process for patients transferred from acute care to long term care facilities. Understanding of the perspectives of those who use the process can help to enrich the information gained through the quantitative evaluation (audits) (Creswell & Clark, 2011) and can add a qualitative descriptive element, which may contribute to a greater understanding of the case being studied (Yin, 2009).

Health region documents and materials pertaining to the implementation of the Med Rec process were also reviewed by the researcher. These included hard copy memos and templates that outlined how to complete both the process and the forms for transfer of a patient from acute care and the receiving of a patient at the long term care facility. In addition to hard copy material, the health region also developed and made available a voice over training Power Point presentation that staff could access through the region's password protected online training website. The researcher reviewed this training resource through access granted by the health region's Med Rec Pharmacist Lead. Health region newsletters that provided updates about the development and implementation of the Med Rec process for region staff were also reviewed by the researcher.

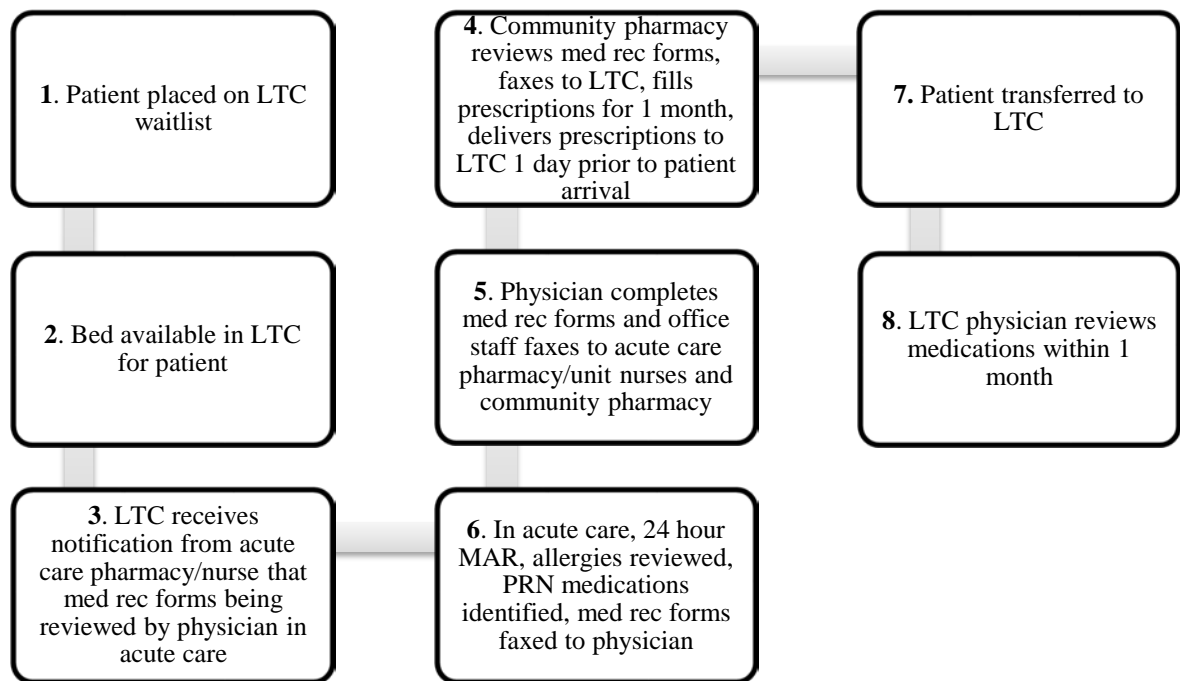
3.2 Key Health Region Experts

The researcher met with key individuals responsible for the development and implementation of the Med Rec process. Consultations were conducted with health region pharmacy personnel (C. Coote, C. Richter, C. Berry and A. Wiebe, personal communications, February 4, 2013; May 6, 2014; October 16, 2014) and administrators in acute care (D. Bayne, personal communication, June 6, 2014; H. Nahachewsky, personal communication, July 23, 2014) and long term care locations where transfers of patients occurred (D. Bleakney, L. Hinz, and V. Ripley, personal communications, June 23, 2014; M. Farrell, personal communication July 16, 2014; J. Friedt, personal communication, July 21, 2014; V. Hnatiuk, personal communication, August 6, 2014; M. Villerosa, personal communication August 13, 2014;). These focused consultations provided the researcher with key information from the health region's quantitative evaluation of the Med Rec process. Through these consultations the researcher gained knowledge about the key health care providers, such as physician groups, and targeted acute and long term care sites that were more likely to be involved in Med Rec for patients transferred from acute care to long term care facilities in the health region. This understanding helped the researcher to focus the qualitative study participant recruitment activities. Additional consultations were held with health region managers who have detailed knowledge of the process of notification of transfer of a patient from acute care to long term care (D. Ginther, personal communication, October 17, 2014). This discussion highlighted the role of notification on the commencement of the Med Rec process, a factor that emerged as important as will be identified later on in the Findings chapter.

3.3 Health Region Medication Reconciliation Process

Appendix D depicts an optimally executed Med Rec process in its complexity. Using the information in Appendix D as a framework, the researcher further summarized the Med Rec process into a simplified depiction of an optimally executed process in Figure 2 below.

Figure 2 Simplified medication reconciliation process



Key: LTC – long term care; med rec – medication reconciliation; MAR – medication administration record; PRN – occasionally used medications

The researcher used the simplified Med Rec process depicted in Figure 2 to assist research participants to locate their roles in the process as they described their experiences with Med Rec. This technique presented the steps of the Med Rec process in the clinical setting for participants which could serve to strengthen the opportunity to understand issues described by participants in their interviews (Stake, 2005; Yin, 2009), and verified that each participant met the study sample inclusion criteria. More explanation of this strategy will be provided later in this section and in the data analysis section.

3.4 Setting – Research Context

The setting of the study provided the boundaries of Med Rec as a single case study. The study was conducted in urban acute care and long term care facilities in a large health region in the province of Saskatchewan, Canada. The health region involved serves over 300,000 local residents (Saskatoon Health Region Annual Report, 2011-12). Patients requiring long term care are transferred from units in three urban hospitals to 14 urban long term care facilities with over 1,500 beds in total (V. Ripley, personal communication, February 2013). In keeping with the Med Rec procedure on transfer of patients between urban acute care and urban long term care facilities, additional study settings included community pharmacies situated within the urban boundaries of the same health region.

3.5 Sample

The target population included all health care providers who are involved in at least one step of the Med Rec process for patients transferred between urban acute care and long term care settings. The researcher aimed to arrive at the right number of the right participants who could add to the understanding of the area of focus (Richards & Morse, 2007). There is no formula for sample size in a qualitative case study method of inquiry (Mason, 2010; Yin, 2009). The focus was on ensuring each group was given a voice to add to the overall evidence about the Med Rec process and to ensure that saturation, or rather that no new information was being heard from participants, had been achieved (Baxter & Jack, 2008; Mason, 2010). In other words, the researcher aimed for completeness of the sample through purposefully targeting the health care providers who could provide a narrative about their experiences and perspectives with the Med Rec process (Baxter & Jack, 2008; Mason, 2010; Richards & Morse, 2007; Yin, 2009). Ensuring that the perspectives of each group of health providers were reflected in the data arising from the interviews assisted to enhance the credibility of the results (Gagnon, 2010). To ensure that each

eligible group was represented in the sample, the researcher continued recruitment measures until all of the types of health care providers who implemented the Med Rec process were part of the study sample and saturation of the data was satisfied.

3.5.1 Sampling techniques

Purposive sampling was used to recruit Registered Nurses (RN), Registered Psychiatric Nurses (RPN), Licensed Practical Nurses (LPN), Pharmacists, and Physicians practicing in the acute care and long term care study settings. The goal was to recruit participants from each group of health care providers who were directly involved with the Med Rec process on transfer of patients from acute care to long term care settings.

Purposive sampling is focused on the attributes of a particular population that will provide data to further understanding of the area of focus (Richards & Morse, 2007). A purposive sampling technique was appropriate for the case study design because it focused on the individuals involved in the Med Rec process and the attributes of each embedded unit of study (Yin, 2009). Determining inclusion criteria for the purposive sampling technique was informed by what was already known about the research area of focus and information from the health region's quantitative audit (Yin, 2009). In this study, the sampling criteria were informed by the activities of health care providers at the various steps in the Med Rec process. For example, pharmacists in the acute care, long term care, and community settings were targeted because they were identified as health care providers who completed a step of the Med Rec process for patients transferred from acute care to long term care in the health region's Med Rec process (Appendix D). Similarly, health care providers from the other professional groupings of nursing and medicine were also targeted accordingly.

Purposive sampling can take the form of the researcher directly approaching participants who fit within the target population of interest or advertising within a particular area where members of the target population of interest might be to find volunteer participants who fit the sampling criteria (Richards & Morse, 2007). In this study the sample inclusion criteria reflected the characteristics of the health care providers who have had involvement with the Med Rec process for patients transferred from urban acute care to long term care facilities.

As with other qualitative methodologies, the target population served as the sampling frame and the resulting sample was selected based on their ability to present the perspectives of the target population (Richards & Morse, 2007). With the transfer of approximately two patients per day from acute care units to urban long term care facilities in the health region (C. Coote & C. Richter, personal communications, February 2013), it was reasonable to expect that this volume of patient transfers would provide an adequate number of health care providers from which to draw the sample. Considering the large number of RNs, RPNs, LPNs, Pharmacists, and Physicians employed in the targeted urban acute care, community and long term care settings it was reasonable to anticipate that a sample of health care providers who completed at least one step of the Med Rec process could be achieved. Regardless of sample size, it was important to ensure that all identified health care provider group's experiences with Med Rec were reflected in the data.

Throughout the data collection phase the researcher took steps to ensure that each group of health care providers involved in Med Rec was included in the sample. This included carefully monitoring the recruitment of each category of health care provider. In addition to purposive sampling the researcher utilized snowball or referral sampling by asking health care

providers who had participated in the study to invite colleagues who they knew had been involved with the Med Rec process to participate in the study (Richards & Morse, 2007).

Although most participants were recruited through the purposive sampling technique, a small number of participants were recruited as a result of the referral sampling technique. At no time did the researcher approach any participants directly. In keeping with ethical and operational approvals, each potential participant contacted the researcher to indicate their interest and willingness to participate in the study.

3.5.2 Recruitment of participants

A variety of methods were used to recruit health care providers to participate in the study. Combined, the methods produced a sample that reflected the health care providers who performed at least one step of the Med Rec process for patients transferred from acute care to long term care facilities.

After University of Saskatchewan Behavioural Research Ethics Board approval (Beh-REB #14-184) and health region operational approval (Research Ethics Board (REB) # BEH-14-184) were obtained, recruitment of participants was achieved with the assistance of the acute care units that transfer patients to long term care, and the long term care facilities that receive the transferred acute care patients. The manager of Pharmacy services and the Med Rec Pharmacist Lead for the health region agreed to assist with the recruitment of study participants. The researcher collaborated with both to identify acute care units and long term care facilities most involved with patient transfers. The researcher then contacted the managers responsible for the units and facilities and set-up a time, convenient to them, to meet with them to explain the study and to discuss recruitment of health care professionals in their areas as study participants.

The managers of three acute care units invited the researcher to attend the morning rounds held at shift change on their units to tell nursing staff about the study and to invite them to participate. A joint letter about the study from the manager of Pharmacy and the researcher was provided by unit and facility managers to health care providers advising them of the study and inviting them to participate (Appendix E). The letter of invitation to participate was also submitted for placement in the health region's long term care newsletter (Appendix G). In addition, a poster providing a brief explanation of the study and contact information of the researcher was provided to managers to post on their acute care unit or in their long term care facility (Appendix F).

Health care providers who were interested in participating were provided with the researcher's contact information by the unit or facility manager, manager of Pharmacy services or the Med Rec Pharmacist Lead. Interested health care providers were encouraged by the unit or facility manager, manager of Pharmacy services or the Med Rec Pharmacist Lead to either contact the researcher directly or to agree to have the manager or lead contact the researcher on the participant's behalf. In all cases, interested potential study participants contacted the researcher directly, either by the phone or email contact information provided on the letter and poster of invitation.

An additional strategy was implemented to recruit physician participants. Physicians who participated in the Med Rec process for patients being transferred from acute care to long term care also held community practices. A list of names of physicians who most often participated in the Med Rec process was identified through the quantitative audit by the manager of Pharmacy services and shared with the researcher. Mail correspondence containing the joint letter about the study from the manager of Pharmacy and the researcher was sent through Canada

Post by the researcher to these physicians and their office staff at the physician's community practice offices. The researcher had no personal, direct contact with physicians during the recruitment phase of the study.

When the recruitment of health care providers began to slow down and it was evident that not all categories of health care providers were as fully reflected in the sample, the researcher repeated the recruitment activities described above with some additional strategies. These strategies included requesting assistance from health region managers, leaders, and an additional group of clinical educators to circulate the study information and invitation to participate. Recruitment activities satisfied the strategy for non-direct contact between the researcher and any health care providers interested in or considering participation in the study. In one case, when contacted by a staff at a physician's office and at the request of the physician's office staff, the researcher sent the joint letter about the study from the manager of Pharmacy and the researcher to the physician community practice office by facsimile.

The second round of recruitment along with the additional strategies did produce more health care provider participants which resulted in a sample of participants who represented health care providers who completed at least one step of the Med Rec process for patients transferred from acute care to long term care.

Through the recruitment activities and consultations with health region managers, leaders, and clinical educators, the researcher discovered that not all health care providers reflected in the health region's complex Med Rec process (Appendix D) were actually involved in the process. Through meetings and consultations with acute care nursing managers, it was learned that nurses (RNs, LPNs, and RPNs) on the acute care units did not complete any of the Med Rec process steps. Acute care nurses may have, in some cases, notified the hospital

pharmacist that a patient was to be transferred to a long term care facility and then the Med Rec process was completed by the hospital pharmacists. In addition to this, the researcher learned that the involvement of physician office staff was confined to simply ensuring the physician received an incoming facsimile notification that the Med Rec forms required a physician signature in cases where this step was not completed on the acute care unit. The non-participation of these two groups – acute care nurses and physician community office staff - was verified with the Manager of Pharmacy and the Med Rec Pharmacist Lead. This discovery resulted in the researcher to halt recruitment of participants from these two groups.

3.6 Data Collection

As mentioned earlier, once ethical and health region operational approvals were obtained recruitment of participants and data collection began. Participant recruitment and data collection was conducted over a nine month period from July 2, 2014 – March 31, 2015.

Following receipt of informed consent (Appendix B), data were collected through digitally-recorded semi-structured interviews with health care providers involved with the Med Rec process for transfer of patients between urban acute care and urban long term care facilities in the study area. A semi-structured interview guide (Appendix H) was used to conduct the participant interviews. The development of questions for the interview guide was informed by the researcher's review of literature that focused on the topics of transitions, patient safety, Med Rec, medication safety, and continuity of care outlined in Chapter 1 of this document, and the theoretical framework outlined in Chapter 2. The researcher also considered information learned through consultations with health region key experts on the Med Rec process.

The interviews were between 30 and 60 minutes in length and were conducted at a place and time convenient to each participant. The researcher kept a detailed audit trail log and

field/case study notes throughout the period of data collection. The log and notes provided a record of data collection and the field notes served to capture observations that may not have been captured in the audio-taped interviews (Polit & Beck, 2012). Both techniques contributed to the “chain of evidence” (Yin, 2009, p. 123) that will enhance the trustworthiness of the information collected about the Med Rec process (Yin, 2009).

For each interview, health care providers were asked for their professional designation, years of experience as a health care provider, and years of experience in their current work setting. This demographic information was used to assist the researcher to ensure the sample of participants accurately reflected the embedded groups (health care provider groups) of the study (Baxter & Jack, 2008; Mason, 2010; Yin, 2009). In addition to the digitally-recorded interviews, each participant was provided with a copy of the simplified Med Rec process expressed in a map format (Figure 2 on p. 29 of this document) and asked to identify where their role was represented on the map. This established each health care provider’s suitability for the sample inclusion criteria. This step also helped provide the context for the participants’ responses to the interview questions and served to confirm a realistic map of how the Med Rec process works in practice, both of which were helpful in the reporting and understanding the findings of the study (Vaismoradi, Turunen & Bondas, 2013).

Two factors guided the end of the health care provider interview data collection. Once it was established that each group of health care providers was reflected in the sample and it was apparent through the technique of thematic analysis that no new categories for analysis were emerging from the individual participant interviews, data collection was concluded. This step involved the identification of developing themes within the entire data set, which reflected the

experiences of the health care providers involved in the Med Rec process (Fereday & Muir-Cochrane, 2006).

Recruitment and data collection were affected by the workflow and competing priorities in the study settings. Seasonal staffing shortages and heavy workloads of the managers and coordinators enlisted to assist with recruitment protracted the period of recruitment and data collection. The researcher anticipated these factors from experience working in the health care system and remained cognizant of the environments in the study settings in order to not place extra demands on them. Recruitment activities were conducted throughout the period of data collection. The research timeline was revisited as necessary to accommodate the needs of the settings of the proposed study and detailed notes outlining additional measures to recruit and collect data were kept.

3.7 Data Analysis

The qualitative approach used in this study helped the researcher develop an understanding of the Med Rec process on transfer of patients from acute to long term care settings from the perspective of the health care providers enacting the process (Vaismoradi et al., 2013). This constructionist approach, or rather the belief that the health care providers' subjective experiences reflect their own reality, fits well with the use of a thematic analysis method applied to the data set (Fereday & Muir-Cochrane, 2006). The thematic analysis method involved the identification of patterns or themes across the data set, which assisted the researcher to develop a narrative of the participants' experiences and perspectives (Vaismoradi et al., 2013). Through a process of coding, themes meaningful to the topic and question(s) of interest were identified and the themes provided the categories for analysis as the narrative of participants was described (Fereday & Muir-Cochrane, 2006).

Each health care provider constituted an embedded unit of analysis within Med Rec as a case because of their different perspectives related to the piece of the Med Rec process with which they were involved. Applying a thematic analysis method across the data as a whole and across the data of each embedded unit contributed to providing an overall description of the health care providers' experiences with the Med Rec process. This analysis along with the participants' expression of their role when presented with the simplified map of the Med Rec process (as shown in Figure 2 on page 29) allowed the researcher to develop a narrative description of the participants' experiences and perspectives. Concurrent data collection and analysis facilitated the depth of description in this qualitative case study approach (Vaismoradi et al., 2013).

As the digitally-recorded interviews were completed they were first listened to in their entirety by the researcher and then transcribed verbatim by a confidential transcription service hired by the researcher. The first step of the analysis was conducted through the researcher's immersion in the data through listening to the digitally-recorded interviews while reviewing the transcripts and field notes. To assist with the sorting, organization, and development of themes, the researcher used the qualitative research software, NVivo (http://www.qsrinternational.com/products_nvivo.aspx). This software assisted with clerical management of organizing data as the researcher focused on analysis (Richards & Morse, 2007; Tuckett, 2005).

Transcripts and recordings were reviewed several times by the researcher to facilitate the analysis of clearly visible or manifest themes and themes that began a description of latent or unseen content in the data (Fereday & Muir-Cochrane, 2006; Vaismoradi et al., 2013). Through this step, the thematic analysis method teased out both the obvious and discreet narrative and

story line of the participants' experiences (Braun & Clarke, 2006). The researcher used an deductive/inductive approach to data analysis (Polit & Beck, 2012; Stake, 2005). This involved starting with the details of the participants' narratives and moving to a more general story line of their experiences with and perspectives of the Med Rec process for patients transferred from acute care to long term care (Polit & Beck, 2012).

Having read and re-read all of the transcripts while reviewing the recordings, the researcher began the coding process with some initial, general, pre-set codes (Polit & Beck, 2012; Richards & Morse, 2007). These pre-set codes (patient safety, continuity of care, communication, challenges, and facilitators) were based on the researcher's understanding of the Med Rec process for patients transferred from acute care to long term care in the region of study and from information learned from the literature review that preceded the research. The researcher started with a section of data, attributed a meaning to the data and then assigned a code. As the researcher read through each transcript and recording systematically, data was sorted into the initial general pre-set codes and new (emergent) codes were identified. As data analysis and coding proceeded, codes were refined into themes and sub-themes. The same data analysis technique was used with all interviews and across the whole data set until no further themes were identified and a narrative along with a map of the Med Rec process as described by participants was developed (Tuckett, 2005).

Analysis of the raw field/case study notes kept by the researcher was included throughout data analysis. Field/case study notes were reviewed along with the review and re-review of each tape recorded interview and corresponding transcript to contribute to an understanding and analysis of the data (Polit & Beck, 2012).

3.8 Trustworthiness

As with any qualitative research, strategies to enhance the trustworthiness of the data need to be taken with a case study approach (Houghton, Casey, Shaw, & Murphy, 2013). A detailed documented audit trail and field/case study notes that reflect the decision points during the execution of the research were kept by the researcher (Richards & Morse, 2007; Wolf, 2003). Careful ongoing tracking and documentation of all methods of data collection including interviews and process document review was conducted to increase the reliability of the information collected about Med Rec (Yin, 2009) and to facilitate the possibility for transferability of the data in similar areas of practice of Med Rec (Richards & Morse, 2007).

As stated earlier, the researcher has had a long career in the health care field, which could provide an opportunity for “the researcher’s effect on the collection, analysis, and interpretation of the data” (Polit & Beck, 2012, p. 589). Two methods were used to manage the potential for researcher bias. Reflexive journaling, a compilation of personal notes reflecting thoughts on the data and possible emerging themes, was used by the researcher throughout all phases of the proposed research. Reflexive journaling assisted the researcher to, for example, note and keep track of ideas about or connections with information from the tape recorded participant interviews. Reflecting on these ideas or connections helped to identify or acknowledge any assumptions held by the researcher (Polit & Beck, 2012). This technique can assist to alert the researcher to the potential for subjectivity in the data collection and analysis phases (Polit & Beck, 2012; Sandelowski, 1986; Wolf, 2003). In addition, the first digitally-recorded interview and its transcript were analyzed by the researcher in conjunction with another researcher who does not share a similar background with the researcher but has experience with qualitative data analysis. The purpose of this strategy, which is also referred to as “investigator triangulation”

(Polit & Beck, 2012, p. 592), is to identify agreement with broad analysis and emerging themes between the researchers.

3.9 Ethical and Operational Approvals and Considerations

The study was reviewed and approved by the University of Saskatchewan Behavioural Research Ethics Board (Beh-REB #14-184) and by the health region which granted operational approval to conduct the research with health region care providers within its facilities (Research Ethics Board (REB) #BEH-14-184).

Having had a long career in health care, it was possible that the researcher could have previous knowledge of a health care provider who was interested in participating in the proposed study. The researcher did not approach any health care provider directly to invite him or her to participate in the proposed research. Information about the study was provided to health care providers by managers of the acute care units, long term care facilities, and pharmacy, and via posters on the units. The managers provided health care providers who were interested in participating in the research with the researcher's contact information or offered to contact the researcher on behalf of the health care provider to identify their interest.

For each potential participant who contacted the researcher about the study, the researcher explained the procedure for consent and provided the opportunity to address questions about the consent and the research procedure and timelines. None of the potential study participants were pressured to participate in the study. The researcher assured all of the health care providers that their participation was voluntary and that their responses would remain confidential and pooled with the responses of other study participants to remove any connection to them specifically. Each study participant was asked to sign an informed consent form which outlined the procedures for maintaining confidentiality and for participant withdrawal from the study at any stage in the study (Appendix B).

Following the transcription of each digitally recorded interview the researcher sent a hard copy of the transcription document to each study participant. The accompanying letter requested that the participants review the transcript, note any changes they would like the researcher to make, and mail to the researcher in a stamped envelope provided the signed consent for the release of the transcript to the researcher for incorporation in the data set (Appendix B) along with the transcript, if changes were needed. All participants returned the signed consent for release of the transcript to the researcher. Three participants mailed the hard copy of the transcript provided with changes they wanted made. In addition, two participants emailed the researcher to say they did not want any changes made to their transcript. All changes submitted by study participants were incorporated by the researcher prior to commencement of the data analysis.

All products of the research including consent forms, audiotapes, hard copy transcripts, and field notes are housed in a locked desk drawer in the researcher's work office to ensure all research materials are securely maintained and organized. On completion of the study, the data will be kept for a period of five years in a locked cabinet in the College of Nursing Graduate Chair's office. All data will be destroyed after the five year period following the completion of the research.

3.10 Conclusion

The methodological approach of an intrinsic embedded single case study design has assisted the researcher to gain an understanding of the Med Rec process for patients transferred from acute care to long term care facilities in the health region setting of study. Understanding the Med Rec process, as a case, through a variety of sources of data and within the context of the health region setting provided perspectives through which to consider the case (Baxter & Jack, 2008). Data collected through digitally recorded interviews with health care providers who

performed at least one step of the Med Rec process combined with the review of health region documents and materials and consultations with key health region experts in the Med Rec process provided the platform for key insights into the Med Rec process as a complex quality improvement initiative.

CHAPTER FOUR – FINDINGS

4.0 The Study Participants

Ten health care providers volunteered to share their perspectives on the Med Rec process for patients transferred from acute care to long term care. Each participant provided information about their professional designation, years of experience in general, and number of years practicing in their current area of clinical practice. When asked, participants also identified which step of the Med Rec process they had been involved in (Figure 2 on p. 29 in this document), which established their suitability for the sample inclusion criteria. Referring to the numbered steps in Figure 2 on page 29 in this document, hospital pharmacist participants identified involvement in steps 3, 5, and 6; community pharmacist participants identified involvement in steps 4, 5, 7, and 8; physician participants identified involvement in steps 5, 6, 8; and long term care nurse participants identified involvement in steps 4, 5, 7, and 8.

The participants included four men and six women who worked in long term care, acute care, and community settings for one year to over 30 years. The sample included a variety of health care providers (two nurses, two physicians, and six pharmacists – three from acute care and three from community) who completed at least one step of the Med Rec process for patients transferred from acute care to long term care in the health region of study.

Participants provided their responses to the semi-structured questions asked by the researcher (Appendix H). Participants responses were analyzed using a thematic analysis approach, summarized, and expressed by themes. Participants' responses were pooled so the individual cannot be identified through their responses. The themes that were identified from a thematic analysis of the participants' responses are presented in the next section.

4.1 Presentation of the Themes and Sub-themes

Table 4 below provides a summary of the themes and sub-themes that were identified through thematic analysis of participants' responses.

Table 4. Summary of themes and sub-themes

Theme	Sub-themes
Benefits of Med Rec	<i>Med Rec is a legal requirement</i> <i>Med Rec improves communication</i> <i>Med Rec improves continuity of care</i> <i>Med Rec contributes to patient safety</i> <i>Med Rec promotes efficiencies</i>
Challenges associated with Med Rec	<i>Timing is important</i> <i>Variation exists</i> <i>Workload is affected</i>
Resources	<i>Knowledge of the Med Rec process</i> <i>Dedicated resources</i>
Recipe for success	

A full presentation of the study themes and sub-themes as summarized in Table 4 will be provided following a general overview of the findings from the study participants' interviews.

4.1.1 Overview

For the most part, the participants interviewed indicated support for the Med Rec process for patients transferred from acute care to long term care. As one participant noted:

I place a great value on the Med Rec Process. I know that in its origins, the integration was challenging, but the intent is to ensure appropriate interventions, improve safety, and patient outcomes by ensuring a review occurs along with improved team collaboration and communication. (Nurse)

The Med Rec process was identified as one that supports the health care providers' practice and the safe transition of patients from acute care to long term care. Med Rec was described by one participant as a strategy to ensure that,

Everything is in place, and all the i's dotted and t's are crossed. And there isn't a gap in

medications that you maybe missed out. (Nurse)

Another participant stated that Med Rec,

Helps me to ensure a smoother transition to resident [long term] care, and we can enable this with a greater focus on the person during this phase as opposed to their pathology. (Nurse)

Prior to the implementation of Med Rec for patients transferred from acute care to long term care, there was no process for having medications in place on transfer, as one participant described:

That chaos on admission before [Med Rec] was insane, and sometimes you missed things... because you would not necessarily have a physician here to get the [medication] orders. And so you're chasing somebody . . . and you're needing to talk to them before our pharmacy closes at the end of the day. They've come, they don't have any meds. So they come from acute care, we have no supper meds, we're trying to get them their meds for the day. So depending on the time of day they come, they may miss some doses. So at least now [with Med Rec] that's easier. (Nurse)

Another participant identified that,

Where the Med Rec hasn't been used – it's probably almost [a] one hundred per cent chance that I'm going to have to make phone calls and it's [the medications] not going to be clear. There's always something. (Community Pharmacist)

In addition to providing the detailed list of a patient's medications,

If you don't have someone go through it [Med Rec] really thoroughly there's usually some kind of discrepancy. Even if it's major or minor . . . you still have to make phone calls and figure it out. You don't . . . just say, "Oh whatever, it's just Tylenol", you still have to figure it out. (Community Pharmacist)

Med Rec was also described as an activity that facilitates continuity of care. One participant noted that,

When a review occurs in acute care . . . I can derive some measure of comfort knowing that these interventions [medications] are safe for this resident and there isn't urgency to make changes in pharmacotherapy at admission here when a person is especially vulnerable to risks such as delirium and falls due to the transition. (Nurse)

Participants provided information about their knowledge of the Med Rec process in

general and about the introduction and implementation of the Med Rec process for patients transferred from acute care to long term care.

We got a little bit [of training] for sure; how to fill out the forms, the process...we got some training when it was implemented. (Hospital Pharmacist)

Participants also provided ideas for improvement of the Med Rec process and strategies that could maximize the benefits to patient safety and quality outcomes, as presented in Section 4.1.2.

4.1.2 Themes and Sub-themes

Based on their experiences, participants identified both benefits and challenges with the Med Rec process and they identified it as an activity that fulfills the legal requirements of medication administration. Participants described the ingredients for a complete and successful Med Rec process when patients are transferred. Opportunities for improvement and further use of the Med Rec process to enhance safe transitions and continuity of care were also described.

Participants described their overall knowledge about Med Rec and their experiences with the introduction of the process at their clinical settings. They also identified that the enactment of the Med Rec process requires resources and has an impact on the workload of health care providers.

4.1.2.1 Benefits of Medication Reconciliation.

Participants identified several areas where the enactment of the Med Rec process was beneficial because it supported health care providers' best practice aimed at delivery of safe patient care. The Med Rec process for patients transferred from acute care to long term care provides the legal prescription needed for continued medication administration. Other benefits of the Med Rec process identified by participants are improved communication and continuity of care, contribution to patient safety and efficiencies.

4.1.2.1.1 *Medication reconciliation is a legal requirement.*

The physical transfer of a patient from acute care to long term care also transfers the responsibility for medication administration from health care providers in the acute care setting to providers in the long term care setting. The Med Rec process provides the legal documentation that is required for medication administration when a patient is transferred. As one participant noted:

As soon as I have a signed copy [by the physician] they [the long term care facility] get faxed that because they need those orders on there and to legally administer [medications]. (Community Pharmacist)

Another participant identified that the forms completed for the Med Rec process provide the formal prescription required for the continuation of medication administration when the patient is transferred:

Our doctors here will look at the prescription I've written and sign off on it and then they will forward that information to the family physician or to wherever the patient is going. (Hospital Pharmacist)

Participants described the use of the medication administration record (MAR) for patients in the acute care setting. The MAR presents a complete list of the patient's medications both regularly scheduled and as needed (which are referred to as PRN medications). Review of the MAR is an activity that is completed as the Med Rec process is enacted (see Appendix D). One participant suggested that the hospital MAR might offer a method other than Med Rec to meet the legal requirement for medication administration:

Quite frankly, why not just send the MAR? That's the most recent thing. (Physician)

It was noted by another participant; however, that use of the MAR does not provide a legal prescription and, in fact, provides challenges with accuracy of the patient's medications:

We'll get a fax from the long term care facility of the hospital MAR and then look at it and we'll say, "These aren't orders," and we've . . . let the facilities know that, but sometimes there's new staff and they think, "Oh we can figure it out from here". So that's

really frustrating when we just get the . . . hospital MAR. And then a lot of the time there's a thousand PRNs on there that they don't use, and . . . then there will be a [medication] that may or may not be continued. (Community Pharmacist)

The acute care MAR is used to determine the medications that the patient may or may not be prescribed to continue taking when they are transferred to a long term care facility. Using a patient's acute care MAR to complete the Med Rec process forms, instead of using the acute care MAR as the list of the patient's medications in long term care provides the opportunity for accuracy. As one participant noted,

With the Med Rec form, there's way less room for error, so that will contribute to patient safety with less room for error and more consistency. So . . . that would be the main thing for patient safety. (Community Pharmacist)

The Med Rec process includes standardized forms that include the prescribed medications for a patient transferred from an acute care unit to long term care. One participant noted that,

There's a standardized form then it's always the same instead of a discharge prescription. (Hospital Pharmacist)

Another participant identified that the use of standardized forms helps with the transition of care:

So I guess the good thing is the nursing homes are actually getting a continuation of what the patient was on, on discharge. That's simple and that's a good thing. (Physician)

In addition, the standardized forms provided a clearly written indication of the patient's medications:

You know your Med Rec form is so well done . . . I love those forms because they're not in doctors yucky hand writing. I can read it, the dosages are very clear. I like that. (Physician)

Participants viewed use of the standardized Med Rec process and forms to fulfill the legal prescription requirement for medication administration when patients' transition from acute care to long term care as an improvement from processes used prior to implementation of Med Rec. One participant stated that standardization is helpful,

because the process is very much the same for us no matter where the facility is because . . . this [Med Rec] form . . . would be the same where ever they're going and it's straight forward. (Community Pharmacist)

One participant observed that prior to implementation of the Med Rec process,

You were always scrambling last minute to get order for the medications and now at least that's something you don't have to worry about. (Community Pharmacist)

Participants identified that the Med Rec process provides a standardized prescription for medications for patients who are transferred from acute care to long term care. In addition, the process is an improvement over the previous practice where medications were not in place prior to the patient arriving at the long term care facility and health care providers had to scramble to ensure appropriate medications were available for administration.

4.1.2.1.2 Medication reconciliation improves communication.

There was consensus amongst the participants that the steps of the Med Rec process and the Med Rec forms facilitated better communication when patients were transferred from acute care to long term care. The ability to include on the Med Rec forms additional explanation about particular medications, dosages, and scheduling of medications can be helpful as the patient transitions to long term care. As a participant noted,

We will often write why something has stopped, or why a dose was changed, and I think often that will get missed in the process of filling out the forms. So they [community pharmacy] get these forms sometimes and they're like, 'Oh gosh, the patient used to be on this and they they're on this, are we supposed to stop this'? So I think it's just a lot more clear because we kind of think the same – pharmacists in the hospital and community . . . they do appreciate the extra information that we give them. (Hospital Pharmacist)

Completion of the Med Rec process provides follow-up contact information if clarification about medications is required. In the case where,

Med Rec hasn't been done, you don't know who to contact to see if stuff has been continued . . . the nurse at the home probably won't know because it was at the hospital. Then you call and sometimes you can't get a hold of the physician. You might end up

taking a verbal order from the family doctor who doesn't even know what was happening in the hospital. (Community Pharmacist)

When Med Rec has been completed according to the process as described in Appendix D the community pharmacy and long term care health providers know who to contact with questions:

We always include, "If you have questions or concerns, please contact me, my number is this. These are my hours of . . . work." So I think they really appreciate having that person [to contact] if something isn't clear to go back to you and say, "Hey, you just discharged so and so I need to clarify something." (Hospital Pharmacist)

4.1.2.1.3 *Medication reconciliation improves continuity of care.*

Health care providers interviewed for this study identified that the Med Rec process can facilitate continuity of care for the patient. One participant noted:

What I think is really awesome is that for the patient it's improving safety because you are communicating everything that's still acute and happening with the patient to another health care professional so that they can take over that care and it doesn't just get missed or swept under the rug. . . . I know when I send stuff to the pharmacy that they are reviewing it and they're including it in their patient care plans. (Hospital Pharmacist)

Participants identified that because of the detail provided by the Med Rec process it will be noticed if a patient is to be discharged on a special medication that may not be easily obtained from a community pharmacy. Steps can then be taken by the hospital pharmacy to ensure continuity in the patient's medication, as explained by this participant.

Usually when I'm doing one [Med Rec] I'll take a look at what they're on and try to figure out whether I should maybe send some of what we would call pass meds with the patient. Like for instance . . . I had a person on [a medication] which I knew would be a problem for the retail pharmacy to compound and get out to the nursing home, so we sent them [the nursing home] a . . . 24 hour additional supply. (Hospital Pharmacist)

In cases where the physicians providing care for the patient in the acute care setting will no longer follow the patient when discharged to long term care, the Med Rec process communicates medical care information from the acute care provider to the care provider in the

long term care setting. Although care providers change, Med Rec provides information to continue the patient's plan of care:

One of the barriers that we would have in long term care as well is that not all family physicians continue to cover their patients once they move into long term care. So not only is there that transition from . . . acute care when they come in to long term care, but it may be that the new accepting family physician doesn't have access to the same background information as well. So that is where Med Rec serves as [an] additional benefit. (Nurse)

4.1.2.1.4 *Medication reconciliation contributes to patient safety.*

Participants identified that the Med Rec process can help reduce medication transcription errors when patients are transferred from acute care:

The nurse would spend a lot of time hunting through and going through medications and trying to make sure nothing was missed and that everything was accurate. And you're transcribing, right? So [there was] the chance of error, and the errors did happen when the nurse would transcribe. (Nurse)

With the Med Rec process, it was noted that,

there's less room for error. There's a much higher chance they're [the patient] going to be on exactly what they were supposed to be on. And then they have someone who's gone through it and looked through exactly what they should be on. (Community Pharmacist)

In addition,

The Med Rec form does make it more seamless and more accurate that they're [the patient] actually going to get what they were intended to be on [medications]. (Community Pharmacist)

The double checking of medications as part of the Med Rec process provides the opportunity for the correct medications to be identified and for errors to be caught. One participant described the process of constant re-checking the medication list:

We're checking it [the medication list] and any time...pharmacists enter any new order for any home...a second pharmacist checks everything...we know that's done at the hospital when they're doing Med Rec. We've got a pharmacist entering these orders and assessing them as they go. . . . I've got a second pharmacist checking the orders that I've

done, comparing my medications against the orders, against the MAR, sending it to the home...and it's also done [double checking] there. (Community Pharmacist)

The double checking of medications as a patient safety measure was also described by a participant as a team effort:

I like that its [Med Rec] timely, that it comes with the patient. I like that the pharmacist is checking it, so I just feel there [are] many patient safety measures we've taken and that is very important when we do meds. . . . So the nurse is looking at it, I'm looking at it, and the pharmacist is looking at it . . . we have all of us looking at this [Med Rec]. (Physician)

Standardization of the forms and documents used with the Med Rec process for patients transferred from acute care to long term care has also contributed to safer medication administration. One participant noted that when receiving a patient transferred to long term care, the review of Med Rec forms,

kept it [the patient's medications] straight in my head. I was able to go through it in a logical fashion. A lot of times prior to the Med Rec we didn't have that [whole] picture. There was no way to assess that picture . . . and now with PIP (Pharmaceutical Information Program) used in conjunction [with Med Rec] . . . for me it's made a better plan of management. (Physician)

The Med Rec process provides a tool for health care providers to assess the appropriateness of medications the patient is taking in light of the overall plan of care for that patient as noted by this participant:

And you know right now my biggest problem is the number of meds patients are taking. And so now we are trying to work out 'Okay do you absolutely need to be taking this?' . . . and when I look at my Med Rec form it's so clearly put out that I can look at that. (Physician)

4.1.2.1.5 Medication reconciliation promotes efficiencies.

Completion of the Med Rec process for patients transferred from acute care to long term care was identified by participants as a strategy that can save time for care providers. It can also

streamline the preparation required to have the patient's medications in place when they are admitted to the long term care facility. As one participant noted:

It makes my job easier. It takes less time to do [prepare medications for the patient's transition] because things are cleaner and we don't have to make – it's not wasting my time and I'm not wasting other people's time just trying to phone doctors and page them – and phone nurses. It cuts down by ten times more phone calls when we don't have it all straight from the beginning. So it saves a lot of time... (Community Pharmacist)

Care providers in the community and long term care find it to be time-saving for them to have the Med Rec process completed in the acute care setting. As one participant stated,

That new [Med Rec] format has what meds were discontinued and PRNs as well. So that's really helpful because . . . the Med Rec [forms] . . . that we get where the hospital pharmacist writes it up, and they have time to go through and get things exact and then have the physicians sign off on those. . . . I rarely have to make calls on those. (Community Pharmacist)

Along with the efficiencies the Med Rec process offers, participants identified that prior to implementation of the Med Rec process, ensuring the right medications were in place when a patient transferred from acute care to long term care could be challenging.

You were always scrambling last minute to get orders for the medications and now at least that's something you don't have to worry about. (Community Pharmacist)

The Med Rec process has contributed to a more efficient care transition for the patient,

and reduced stress [for the health care provider]. That was always a stress to get that done. You were on a time limit right, and you couldn't chase those doctors, the person wouldn't get their medications . . . so yeah, it was stress, it was stressful. (Nurse)

A goal of the Med Rec process is to ensure the transferred patient's medications are in place at the time of admission to long term care. Participants identified that it is important for the medications to arrive at the long term care facility in time so the patient does not experience any gaps in their prescribed medication treatment. The Med Rec process promotes efficiency in the timing of the arrival of medications with the arrival of the patient at the long term care facility.

The nice piece about that too is having the medications actually arrive before or with the resident because sometimes they're without their meds until late evening for deliveries. (Community Pharmacist)

In addition, the Med Rec process provides a tool that positions the patient's care for

safety for ensuring that, 'yes we have the right medications,' but also that piece where the meds can now be here when the resident arrive so they're not missing. (Community Pharmacist)

4.1.2.2 Challenges associated with Medication Reconciliation.

Participants identified challenges with the Med Rec process for patients transferred from acute care to long term care. The challenges include issues with the timing of the Med Rec process, timely completion of the steps of the process, variation in the completion of the standardized forms, and the impact of the process on health care providers' workloads.

4.1.2.2.1 Timing is important.

Participants identified that early notification of the transfer of a patient from acute care to long term care is important for successful completion of the Med Rec process. It was challenging when adequate notification was not received:

I think the biggest limiting factor is the shortness of time we have to do it [Med Rec] in a lot of times. We get notification the day before they [the patient] are leaving. We have to fill that [Med Rec] form out, we have to get it to the doctor, have them sign it, [and] get it to the [community] pharmacy in order for the medications to be at the nursing home by the time the patient arrives. And often 24 hours is just – well it's often less than 24 hours – is just not enough time to make that transition . . . there's times when we have several days notification which helps. (Hospital Pharmacist)

The health care providers interviewed expected to receive at least 24 hours notification about the transfer of a patient from acute care to long term care as outlined in the Med Rec process (Appendix D). Even with 24 hours' notice, participants noted that it could be challenging to complete the Med Rec process in time for the patient transfer.

More often than not I would say we're not given that 24 hour notice. We tend to prioritize this Med Rec as our highest priority for the most part. So we do get most of

them done...just because it is of such importance within our clinical scope . . . but sometimes the timing is extremely short and sometimes they've already been discharged [to long term care]. (Hospital Pharmacist)

Inadequate notification of a transfer can negatively affect smooth completion of the Med Rec process by all health care providers involved. As one participant noted,

If it's [notification] late in the day it can be a problem. If we're having a busy day it can be a problem, and then also if there are any questions [about the medications], getting a hold of the people [who know about the medications] to figure things out [can be a problem]. (Hospital Pharmacist)

In addition, participants noted that variation in notification can occur by the time of day, which can preclude efficient completion of the Med Rec process:

First thing in the morning . . . we'll probably get a few notifications, and then late in the day. So...you look throughout the day for the notifications, but I find that you come in in the morning, you're notified, or it comes at 3 – 3:30 [in the afternoon]. (Hospital Pharmacist)

When asked what might contribute to a delay in notification, one participant noted:

I think it's probably [the system's long term care placement service] for getting us notification [in acute care]. For community pharmacies – it's the doctors probably that bottleneck the timing of signing it off, but I think probably for us it's notification from [the system's long term care placement service] that the patient is leaving or has accepted a bed [in long term care]. (Hospital Pharmacist)

Delayed notification can also occur when the long term care facility to which the patient is being transferred is known, but the receiving unit and patient's bed number is not known by the staff at the acute care site. In this case, the transferred patient's Med Rec forms might not reach the health care providers on the receiving unit. When the Med Rec forms are not received by the health care providers on the receiving unit, there may be confusion and a threat to the continuity of medication administration for the patient. As one participant noted,

And I know there's a piece missing as they [staff in acute care] don't know what [unit] or bed [in the long term care facility] . . . acute care would know where they're [patients] all going. So they [acute care] will fax it [Med Rec forms] to our main number and there's confusion there [at the main office]. So sometimes I will find them [Med Rec forms for

patients being transferred from acute care] in my mailbox and I'm not here all weekend or Fridays. (Community Pharmacist)

Other delays in completion of the Med Rec process involved the availability of health care providers to complete the process. The requirement of the physician's signature on the Med Rec forms to complete the process provides challenges. Participants proposed that the difficulty in getting the physician's signature on the Med Rec forms could be related to physician's sharing their time between acute care, the community, and long term care.

I think it's a challenge for physicians a lot of time just to get those orders signed in a timely fashion because especially [in acute care] we are dealing with a GP [general practitioner] who's got a full slate of patients coming in their office that day. So even if I get it [Med Rec form] to his office first thing in the morning he may not have time to look at it until 5 in the afternoon and then that patient is going [to long term care] at 9 o'clock the next thing in the morning. When is the pharmacy supposed to fill it? (Hospital Pharmacist)

In situations when the physician was not immediately available, other health care providers involved in the patient's transition from acute care to long term care developed "work arounds" to facilitate the acquisition of the physician signature.

What we've found...is the hardest part for us is getting that doctor to sign it – like physically finding that doctor to sign that Med Rec. So what we always do when we receive that heads up [fax of unsigned Med Rec forms from acute care for a patient being transferred to long term care] is we always phone the office – make sure they've [the doctor] received a [faxed] copy too. Things get lost or you know they're stuck in the queue. But we make sure that Med Rec is actually given to that doctor or placed on the desk and remind them of the priority of it. Ideally we're supposed to have that signed within four hours of fax time. (Community Pharmacist)

A participant described an additional, complex, and time consuming step in obtaining the physician's signature on the Med Rec forms when they followed-up with the physician's office to inquire about the status of the physician's completion of the Med Rec forms:

"Did you get it [the faxed Med Rec forms]? Is this doctor even in this afternoon? And if so can you make sure they sign it right away? Or if they're not there is there somebody covering that can?" If there's nobody there available to sign it then I'll phone back to the

hospital, let them know what's going on or come up with another plan – see if there's another doctor we can get [to sign the Med Rec forms]. (Community Pharmacist)

Often, the community pharmacy will contact the pharmacist in the acute care setting for assistance in obtaining the physician's signature on the Med Rec forms, as a participant noted:

The community [pharmacy] may call you and say that “the physician hasn't signed this [Med Rec form], can you round him up? Can you do what you need to do?” We do have a . . . unit here where typically the physician comes around probably once every day, once every two days. So that [signing of the Med Rec forms by a physician] tends to get done in house [the hospital]. But . . . when we do fax it [Med Rec forms] to a clinic outside [the hospital] it's definitely the physician [signature] that we're waiting on. And we're done at that point. . . . We just may call the office if we know one particular office where the physicians are extremely busy and they like to be notified [about the Med Rec forms] and this has to be done in a time-sensitive manner. We'll phone the secretaries there and get that done as well. (Hospital Pharmacist)

When the physician's signature on the Med Rec forms cannot be obtained in a timely manner, an alternate method is for the pharmacist in the acute care setting to strategize with the long term care facility:

I would talk to the home [long term care facility] and decide what we want to do....if they know who the doctor is going to be and they're [the doctor] available – that's what I would do. I would fax it [the unsigned Med Rec forms] to the home. The home always gets faxed whether it's the signed copy [or not]. As soon as I have a signed copy they get faxed that because they need those orders on there to legally administer [medications]. . . . So we would have that discussion and figure out who gets what and send it to the family doctor if that's a reasonable thing to do. Or if that doesn't work, we don't know who the family doctor is yet we'll go back to the hospital and see if they can find someone [a physician] to sign. (Community Pharmacist)

The “work arounds” described to obtain the physician's signature on the Med Rec forms in a timely manner were described by participants as interplay between the acute care unit, the long term care facility, and the community pharmacy. As one participant noted,

You learn tendencies for a physician, who's going to sign it, who wants faxes, which office says you need to call and notify them that this needs to be addressed; you learn that over time for sure. (Hospital Pharmacist)

Reflecting on the challenge associated with getting the physician's signature on the Med Rec forms at the acute care end of the Med Rec process, one participant described the reality of completing the process at the point of care through the support of the patient's health care provider team.

I guess you have to look at the way things are done in acute care . . . with the group of doctors – You know they're all kind of coming and going and having little bits to do with that patient. So the saving grace I think is the fact the pharmacy is doing that Med Rec and they've got all the information in front of them and they can go through and do that thoroughly. So as long as the Med Rec is done well – which I have no reason to believe it's not, because I think their [pharmacists] training to get this done has been really well done – as long as you can trust that [Med Rec] form is well done, then I have no problem which doctor signs it. It's just a legal formality at that point. (Hospital Pharmacist)

It was also noted that when the Med Rec form is not signed by a physician in a timely manner for the community pharmacy to fill the prescriptions and get them delivered to the long term care facility in time for the patient's admission,

You might end up taking a verbal order from the family doctor who doesn't even know what was happening [with the patient] in the hospital. (Community Pharmacist)

This strategy was identified as not optimal for continuity or safe delivery of care.

4.1.2.2.2 *Variation exists.*

In situations where there are more than one care provider involved in a patient's care, there can be challenges with each care provider having full knowledge of the patient's medications. One participant described the challenge of timely completion of the Med Rec process when more than one physician is providing care:

So they [the patient] get discharged [to long term care] and I get the [Med Rec] faxed to me. The problem with that is . . . then I have to sign off because that's the [process]. So I'm looking at the Med Rec of maybe my patient, it usually is. But if I'm not here [in the office] it'll go to [another doctor] and so they know this [patient] from no one. And they just sign it. So it's meaningless. So why does it even have to come to us quite frankly? Other than you need a doctor to sign it. (Physician)

Another participant noted that variation in care provider in the long term care setting can also present a challenge in the continuity of the patient's care team:

We have one facility where they do have a house doctor . . . a doctor that takes care of the majority of the residents. And then we another facility where there's a nurse practitioner, but all the residents have different physicians which come in at different times and that can be a little more difficult. (Community Pharmacist)

Variation in the way the Med Rec forms are completed by the care provider in acute care or variation in care provider practice can result in a situation where care providers further on in the Med Rec process have to interpret what should be the correct list of medications for the patient discharged to the long term care facility.

There's a standardized [Med Rec] form then it's always the same instead of a discharge prescription. Sometimes . . . the doctors will write it in different ways too. And sometimes we'll just get – sometimes they'll write out all their medications and sometimes they'll just write for the antibiotics. They'll just write for a couple of things [medications]. Although usually that tells us that they're going to be on the same thing [medications] as before. (Community Pharmacist)

Although the Med Rec forms provide a list of the medications the patient is to be administered in the long term care facility, interpretation of the medication orders was not always provided.

The only problem with the Med Rec form is it doesn't always give us why they started the med or why they discontinued a med. And that we'd really appreciate. Because when you start a new med, what were you thinking? What was your game plan? Where were you aiming? And that's not always [provided] and we often use the medication not for the classic indication. And I think sometimes that would be really helpful . . . on the Med Rec form. (Physician)

4.1.2.2.3 Workload is affected.

There was consensus among the participants that completion of the Med Rec process for patients transferred from acute care to long term care placed an additional workload on existing health care provider resources. This was particularly noted for pharmacists in the acute care setting where the onus is on them for completion of the Med Rec forms.

It's a pharmacist [in acute care] that fills out that [Med Rec] form. I imagine you'd have to have the staff available to do those forms and I'm sure that takes up quite a bit of time. (Community Pharmacist)

Although seen as important, Med Rec for patients being transferred from acute care to long term care is a process that has to be managed along with other work.

I think at the start we had a difficult time prioritizing this [Med Rec for patients transferred from acute care to long term care] as our major focus in pharmacy. You know traditionally we had out other clinical practices, rounds, other things we did. So when this [Med Rec] first came out we had a tough time prioritizing, or looking into the queue, or identifying that this patient may be going [to long term care] in the morning and its four o'clock [now]. So maybe at the beginning it was a little more cumbersome for us, but since we've kind of adjusted our workload and focused more on this [Med Rec]. (Hospital Pharmacist)

Participants identified that they needed to be flexible managing their workloads to accommodate competing priorities in their clinical work.

And historically we've had to be that anyways [flexible], whether it was rounds, acute issues, or staff shortages, you have to be flexible in this job, but this [Med Rec] was just one more thing to take on. (Hospital Pharmacist)

Participants also identified that competing priorities can influence the completion of the steps of the Med Rec process:

Pharmacy resources and maybe staff shortages, you know sick days, stuff like that. Med Rec may have to wait a few hours if there's nobody here in the morning, you'd have to wait on the evening staff to do it. That may be a hindrance to the timeliness of the process. (Hospital Pharmacist)

Staff shortages coupled with not enough advance notice of a patient transfer were identified as factors that could have an impact on the completion of the Med Rec process, as well:

There are times – because we have shortage of staff – that we just don't have enough people to do that [Med Rec for patients transferred from acute care to long term care]. And you get behind. Sometimes there's a very short turnover period with some of these patients and they'll come in one day within that week and sometimes within two, three days they're gone to a nursing home. So it's mostly those short turnaround patients that sometimes we've missed or . . . this summer we were down to one clinical pharmacist to cover the entire hospital, there's times you just don't have enough bodies to cover everything. (Hospital Pharmacist)

Participants reported that the delivery of other services may have been affected by the prioritization of completion of the Med Rec process:

It [Med Rec] improved all of those [patient safety, continuity of care] but at the expense of other clinical interventions or practice by us [pharmacists]. I understand that this is important and it definitely improves patient safety. It's just, it's tough that we've cut back other services as well, that also improve patient safety. So I think, at the end of the day, it's just an issue of manpower and pharmacists able to work. So I agree with the whole Med Rec. I'd like to do it on everybody at every stage but at this point it's probably unrealistic to do that. (Hospital Pharmacist)

Although there was agreement with the importance of the Med Rec process for patients transferred from acute care to long term care, this could have been at the expense of other services because of competing priorities.

I see the value in it [Med Rec]. Definitely. It is an important issue in health care. For sure, safety issue. But when some of those other services are taken away, you know, it's a little souring. (Hospital Pharmacist)

Participants indicated that as time moves forward, it may be possible that the completion of the Med Rec process is becoming more of a standard practice.

Maybe initially it [Med Rec] took away from other clinical services, so then everybody, not everybody, but individuals may not have been as accepting of this process, but I think over time, they do realize that it is important. It's just a matter of man-power. (Hospital Pharmacist)

Participants reported that although completion of the Med Rec process can be time consuming, the longer they work with the process, the more efficient they become in completing it:

I think its [Med Rec process] definitely much more smooth [now]. You know initially it may take a half hour, forty-five minutes to go through the process and now I think for the most part, as long as there aren't any significant issues you can probably do [it in] fifteen, twenty, twenty-five minutes. So I think the time to do the actual discharge Med Rec has gotten better. (Hospital Pharmacist)

One participant felt that increased comfort with the Med Rec process would result in improved efficiency.

I think once we get more comfortable with this particular process and Med Rec on admission and maybe electronic discharge, time is the factor. We just get more comfortable with it. Nurses, doctors, the process will improve via that, and then we can look at other services that we provide once this is smoothly running. (Hospital Pharmacist)

Participants identified that completion of the forms associated with the Med Rec process has to be done alongside a discussion with the patient being transferred in order to provide a complete medication history. Although important, this can also be time consuming.

At this point, a lot of pharmacists or nurses [are needed] . . . just to review. You know, if our eHealth system gets better or more comprehensive [it would help] you know. But it's not only documentation and records that you have to review; you have to talk to the patients. So it would take a lot of resources to incur all of those Med Rec processes for sure – lots of pharmacist and nurses [would be needed]. (Hospital Pharmacist)

Participants reported instances of patient/family inability to report their medication history and missing the patient altogether when they were transferred to long term care quickly without being seen for the Med Rec process because of not enough advance notice of the transfer. These circumstances increased workload as the health care provider worked to find or track down the patient information needed to complete the Med Rec process. A particularly challenging scenario was created when the patient had already been transferred.

For the most part I would say a lot of our patients maybe aren't coherent enough to give us an actual med history so we do require a lot of the chart, documentation, family members, and if they [the patient] are gone, then it is difficult to get a hold of them after the fact [after transfer]. And sometimes it's just "best guess" as well, you know. If you can't actually talk to the patient or caregiver you only have the documentation [in acute care] to go by and sometimes the way they take them [medications] at home or the way their family give it to them . . . may differ. (Hospital Pharmacist)

It was clear participants felt that factors such as the volume of patient transfers, patient characteristics, time, workload, and availability of trained staff to complete the Med Rec process had an impact on the timelines for completion of the process.

Time. Definitely, time is a big factor, number of people [patients being transferred]. You know, I look at the other two [acute care] sites pharmacy load is pretty heavy. So work load. Not having a good tool. Like when the nurses do it [medication history] they get the PIP [Pharmaceutical Information Program, which is a provincial medication profile that also lists allergies] form. But that's it. And maybe we should revise the PIP form to have some of these questions that help them [the nurses] remember "yeah I should ask about daily aspirin, multi-dose things," etc. that don't show up on a PIP. So unless you've got that rote list of questions in your head to ask people about some of these things that won't show up on the PIP that are often forgotten. To sum it up, barriers – time, tools, cognitive condition, and compliance of the patient. (Hospital Pharmacist)

4.1.2.3 Resources.

Participants described the need for resource capacity, such as health care providers, for completion of the steps of the Med Rec process. Although this theme is closely knit with the impact on workload, presented earlier in this chapter, the discussion about resources extended to health care providers' knowledge of the Med Rec process, in general, and resources to roll out the initiative in the health region of study.

4.1.2.3.1 Knowledge of the Medication Reconciliation process.

Participants described their knowledge of the general process of Med Rec. Participants who were earlier in their careers identified that they learned some basic information about Med Rec during their undergraduate health sciences education.

In school...in our classes we talk about Med Rec... (Community Pharmacist)

One participant described being introduced to the concepts of Med Rec as a safety initiative in their undergraduate education.

It [Med Rec] is . . . briefly explained in the later years of Pharmacy. I think the first time it was mentioned was probably in third year Pharmacy. And it's just kind of a general blurb about it. There's no detail as to all the steps you are involved in. It's just like, it can reduce errors and it's a great thing in general...but that's about all you get. So until you are doing a practicum . . . that's when you . . . get your first real exposure to it. (Hospital Pharmacist)

Participants who were later on in their careers identified that they had become aware of the Med Rec process as their careers progressed,

It [Med Rec] was not part of my training 25 years ago and I would say Med Rec probably is a fairly new idea. Like probably within the last five years or so. That's when it really . . . caught on. I think there's talk of it maybe as far back as ten years ago, but it started in our [health] district about 5 years ago. (Community Pharmacist)

Some participants gained all of their experience with the Med Rec process in the health region of study:

Well actually I had to introduce it to long term care when it was rolled out. (Nurse)

Other participants learned about Med Rec prior to working with it in their current roles:

I think we didn't [learn about Med Rec in undergraduate education]. It came out in the hospitals and you just learned because you were handed it down, right? So it just came out and then we started doing this [Med Rec] . . . even in rural Saskatchewan . . . I worked [in] Saskatchewan rural programs . . . in . . . the outside [urban center] hospital. So I got familiar with it and it's not hard to learn. (Physician)

Some participants described acquiring knowledge about the Med Rec process in general through their experience with it in the clinical setting.

There was no formal orientation process when I'd started in this position but I've had some exposure to it [Med Rec] in my work previously in working with acute care. (Hospital Pharmacist)

In their reflection on the implementation of the Med Rec process for transfer of patients from acute care to long term care, participants described how they were introduced to the process in the health region of study.

I guess we had orientation [to Med Rec] as far as, you know, what the forms were and how to fill them out. Nothing terribly formal; it was probably done at a staff meeting for those who were present that particular day. And then I think, generally, because I'm a casual I often miss the staff meetings, so I can't remember if I was there for the first one or not. It probably would have been a matter of one of the other clinical pharmacists showing me the forms you know in five, ten minutes, saying, "Okay, here's what you have to do." (Hospital Pharmacist)

Another participant recalled their introduction to the Med Rec process as being communicated through their supervisor.

It definitely would have been . . . my manager [who told me] . . . I'm sure she sent me information on it. (Hospital Pharmacist)

The experience of some participants was that some formal education was provided about the introduction Med Rec process,

I went from area to area [in the long term care facility], we did up file folders with all the information, because that works well, because of off hours staff, lots of staff work nights. Some of them just work weekends, right? So you don't always catch people. So we did that folder and we went around and did presentations [to the staff]. (Nurse)

Other participants reported that they had received no formal orientation or education about the implementation of Med Rec:

There was no formal education . . . I think most physicians had heard about it [Med Rec], read about it. (Physician)

One participant identified that although they received no formal orientation to the Med Rec process for patients transferred from acute care to long term care, they had some knowledge and experience with the Med Rec process from previous acute care work in the health region of study.

No there was no formal orientation process when I'd started in this position but I've had some exposure to it [Med Rec] in my work previously in working with acute care. I place a great value on the Med Rec process. I know that in its origins, the integration was challenging, but the intent is to ensure appropriate interventions, improve safety and patient outcomes by ensuring a review occurs along with improved team collaboration and communication. (Nurse)

Participants identified that some questions about the Med Rec process itself for patients transferred from acute care to long term care may have remained when the initiative was introduced.

I think the hard part is trying to pin physicians down and tell them to do something. It's tough . . . trying to get . . . physicians to listen to you for any period of time. I think the

way it rolled out was not awful. I think if they asked for our input I would have said you need to date when you started the medication, when you discontinued, and tell me why. I think if you asked for my input before you rolled out the form that's what I would have said. But in health care that never happens, right? (Physician)

Participants identified that there was a learning curve when the Med Rec process was introduced even though they had knowledge of the process.

I think most of the staff here was aware of when it was beginning and what had to be done. Definitely there were some learning processes at the beginning, but it's all gotten pretty streamlined now. (Hospital Pharmacist)

4.1.2.3.2 *Dedicated resources.*

Participants identified that the resources that are needed to complete the Med Rec process for patients transferred from acute care to long term care include health care providers who are assigned to complete the steps; health care providers who have knowledge of the process; and because of the required process timelines and volume of transfers, space where medications can be prepared.

Health care providers who are assigned to completing the steps of the Med Rec process respond to preparing medications for the patient's transfer to long term care:

Now we usually have someone just doing long term care, so the day of the transfers we can usually deal with it [Med Rec]. (Community Pharmacist)

A benefit of having staff assigned to the completion of the Med Rec process is the potential for improved communication and continuity of care:

There's one pharmacist whom the day to day communication is most often through and then there are a few others that work in the pharmacy . . . but also work as pharmacists in the sending institution [acute care] as well. So they can be resources . . . it's been a very successful relationship. (Community Pharmacist)

In addition to assigning health care providers to complete the steps of the Med Rec process, participants identified that the preparation of medications for patients transferred from

acute care to long term care, and the subsequent follow-up with those patients in long term care, has become a specialized practice.

That's our primary focus here. Ninety-five percent of our business is long-term care service . . . so it's pretty much the focus of our business . . . pharmacy has been doing nursing home business since the mid 70's...went on to design a special packaging system...and then just over the years we've expanded that service . . . and we provide service to 1100 [long term care] beds. And because of . . . all the efficiencies that we've made, the specially trained staff, the equipment we have, we're able to provide that service. (Community Pharmacist)

In addition, participants commented on specialized practice within the health care team. From experience with the initial introduction of Med Rec in the health region of study, it was noted that the health care provider groups in pharmacy roles may be better positioned to complete the Med Rec process.

What we know from the basic initial Med Rec [is] that pharmacists and pharmacy technicians tend to do a better job just even straight transcribing [the medications on to the Med Rec form]. We tend to catch maybe more things than a nurse would. (Hospital Pharmacist)

A participant identified some reasons that could position the pharmacist to be the most appropriate health care provider to complete the Med Rec process:

Well like I said . . . these are the medications that have been discontinued or changed, that's helpful for the physicians I think. Timeliness, we probably get it all completed and faxed in a more timely fashion than the nurses who . . . have to fit it in when they could between caring for their patients. So I would say those probably are the two biggest things. And I guess, like I said, sometimes sending pass meds to . . . deal with some of those more difficult medications, which a nurse wouldn't have necessarily clued into or know that they could use this option. (Hospital Pharmacist)

Devoting the practice of certain health care providers to specialize in the completion the Med Rec process for patients in care locations such as long term care also requires the dedication of space to complete this important work:

I'm working in the long term care part the majority of the time . . . you're kind of in a whole separate area with our machines and stuff where you can focus . . . we have separate fax machines too. (Community Pharmacist)

4.1.2.4 Optimizing success.

Participants identified that the completion of the Med Rec process could be optimized if certain things were in place. Some recommendations included: accurate and complete information about all of a patient's medications; advance notice of a patient transfer from acute care to long term care to facilitate efficient completion of the Med Rec process; the use of alternate strategies to secure required physician signatures on the Med Rec forms; and more health care provider education and training to prepare them to complete steps of the Med Rec process. Combined, these actions could maximize the potential of the process to contribute to safe, quality outcomes for patients who are transferred from acute care to long term care.

When health care providers provide complete and specific information about the patient's medications on the standardized forms,

it helps with the management of the patient. It helps in monitoring that patient. If it would just give me, "What were you thinking when you initiated this or you discontinued that or you increased this?" The biggest thing for me is there is no diagnosis. There is no "Why am I using this med in this dosage for this period of time". I'd really like that added little bit. And I'd like to know if . . . the patient was on this med prior to the hospital admission or is it something that started on hospital admission. That would be important for me to know. Was the patient on this at home? Or was this started on this admission? And also, you know, if the patient is having problems you know that they have only been on it for this short time. Maybe we can change [the medication]. So for me it doesn't tell me if this is a new med or an old med. (Physician)

In addition, complete information about all of the patient's medications helps to improve the efficiencies of subsequent steps of the process for health care providers,

That new format has what med were discontinued and PRNs as well. So that's really helpful . . . the Med Rec ones [forms] that we get where the hospital pharmacist writes it up and they have the time to go through and get things exact, and then have the physicians sign off on those. . . . I rarely have to make calls on those. (Community Pharmacist)

Participants identified the more advance notice of a transfer of a patient from acute care to long term care, the better. Advance notice of the transfer is one aspect and the other involves

giving the long term care facility and the community pharmacy a “heads-up” that a patient is being transferred and the Med Rec process is being completed for the transition.

I’ve gotten really good feedback from community pharmacies by giving that heads up. This patient is going to be coming your way, I will fax you the list [of medications] I have. Once it’s signed [the Med Rec forms] and official I will re-fax it [to the community pharmacy]. They [community pharmacy] really appreciate having a heads up and also a contact person when they have questions. We always include, if you have questions or concerns, please contact me. My number is this. These are my hours of work. So I think they really appreciate having that person [contact information] if something isn’t clear to go back to you . . . to clarify something. (Hospital Pharmacist)

Advance notice also helps health care providers in subsequent steps of the Med Rec process to prioritize their work and complete steps of the process that will help contribute to the efficiency of other members of the patient’s health care team.

It is nice to have some notice so that you can work it [Med Rec] into your day, or the next morning, I’ll do this first thing so that it’s ready to go and when the team comes around to review their patient; prescription’s ready to go. They just have to quickly read through it and sign it. (Hospital Pharmacist)

As reported earlier in this chapter, challenges can be encountered when there is not enough advance notice about a patient’s transfer from acute care to long term care coupled with difficulty obtaining the physician’s signature on the Med Rec form. Participants identified the emerging practice of prescriptive authority by pharmacists as one strategy that could assist to address some of the challenges with the process step of getting the physician’s signature on the Med Rec form within the timelines outlined in Appendix D.

I think probably the biggest limiting factor is the shortness of time we have to do it [Med Rec] in a lot of times. We get notification the day before they [the patients] are leaving. We have to fill that [Med Rec] form out. We have to get it to the doctor, have them sign it, and get it to the pharmacy in order for the medications to be at the nursing home by the time the patient arrives. And often 24 hours is just – well it’s often less than 24 hours – is just not enough time to make that transition. . . . So probably if we had Level 1 prescribing where we could complete it and sign it [the Med Rec form] we would save a huge amount of time. I think Level 1 prescribing overall would help us a fair bit. (Hospital Pharmacist)

Prescribing authority encompasses a recent change in the regulatory bylaws of the Saskatchewan College of Pharmacists (http://scp.in1touch.org/uploaded/web/refmanual/Bylaws-Regulatory_CURRENT.pdf). Level 1 prescribing authority can be put in place through a collaborative agreement between the physician(s) and pharmacist(s) who care for a group of patients. Level 1 prescribing authority allows pharmacists to provide the required signature on the Med Rec form, which fulfils the legal prescription requirement for medications when the physician is not available to sign the prescription or complete the Med Rec form.

Level 1 prescribing authority by pharmacists would be in place when the physicians who normally provide the medication orders for transfer of a patient from acute care to long term care agrees to the pharmacist signing the Med Rec form. One participant identified:

And I trust the pharmacists. They're good. They'll make rounds and make suggestions. And that's fine I have no problem with that. . . . So really once they've done a Med Rec and it's exactly what they were on, on the last day, why don't you just send it directly to the nursing home [instead of to the physician for signing]? It's meaningless to send it to me . . . they only do it when they know they've got a bed [in long term care]. (Physician)

Another participant identified potential benefits for Med Rec with Level 1 prescribing authority for pharmacists and that the arrangement may not be acceptable to all physicians:

But not every physician likes that [the requirement to sign the Med Rec form], just from the ones I've asked. Certainly a lot of them would be very happy if we would fill it out [the Med Rec form], sign it, fax it, and they don't have to do anything with it. But there are some that prefer to see that last set of orders before that patient leaves their care. (Hospital Pharmacist)

It was suggested that an alternate Level 1 prescribing authority collaborative arrangement could be put in place at the community pharmacy setting instead of at the acute care site where the patient transfer to long term care originates. One participant identified that this alternate arrangement may have implications for safety and continuity of care:

We were told at our staff meeting . . . that some of the retail pharmacies want to be the ones that sign off on it [the Med Rec form, using Level 1 prescribing authority] I

know for myself if I was the retail pharmacy I would want who ever filled out the form to sign it and take legal responsibility for it, as opposed to me who often knows nothing about this patient at all, taking that responsibility. So from my perspective the option that makes the most sense would be the pharmacist who completes it in the hospital also signs for it. (Hospital Pharmacist)

The participant added this note on review of the interview transcript:

FYI – we now have the option of using Level 1 prescribing to sign off if no physician available. (Hospital Pharmacist)

Participants, however, did agree with Level 1 prescribing authority by acute care pharmacists:

We've had the odd one [Med Rec] where the hospital pharmacist has done prescriptive authority on it. So we've been okay with that as long as there are no narcs [narcotics] or controlled drugs. We had talked about that and I thought we'd see more of them than we have, but I've only seen I think, two. So it's coming along. (Community Pharmacist)

Participants identified that health care providers require education to acquire the skills required to complete the Med Rec process. One area of education involves learning how to conduct a best possible medication history. The ability to conduct a comprehensive medication history would position more health care providers to complete the steps of the Med Rec process.

There's, actually, even instances where a pharmacist would have picked up a certain problem, but a pharmacy technician wouldn't. And it's again a difference in just the knowledge therapeutics base that makes the difference. One of my biggest pet peeves with Med Rec, in general, – the process – is that why don't we train nurse and doctors who are more the front line people to do a proper med history? We expect you to do a proper physical history, so why should you not be trained and give you the tools to do a proper med history too. Pharmacists probably are the best person to do it, but we're not on the front line. And we don't have the money or resources to put a pharmacist there all the time . . . for 24 hours of the day at every site. So . . . we have to, I think, better train nurses and doctors . . . and give them the tools . . . you know if you give them a good tool to use then it's a lot easier than just trying to go through a rote list of questions in your head. (Hospital Pharmacist)

In addition, participants reasoned that if more health care providers were trained to conduct a complete medication history, there could be an opportunity to teach these skills to colleagues and lessen the burden on pharmacists for completion of the Med Rec process.

Someone who teaches them [doctors and nurses] that is good at doing it [Med Rec] themselves, so whether that's . . . a nurse, who is qualified, or a physician or pharmacist. And . . . a tool to use – a check list – makes it pretty easy. And there's always things that are going to fall through the cracks, because you know these people, especially the majority of people that come in [to acute care] for a medical admission, are usually elderly, often cognitively not very good; plus they are sick and ill at the time. So you can't always blame it all [an omission in the medication history] on the person taking the med history. (Hospital Pharmacist)

There was consensus amongst the participants that the implementation of the Med Rec process for patients transferred from acute care to long term care is good practice.

It's nice to see it . . . coming through all the steps, because admission Med Rec was such a big push, but it's nice to see it finally moving to discharge and transfer. (Hospital Pharmacist)

Participants did, however, see opportunity for improvement in the use of the Med Rec process, in general. One participant noted,

Well actually, I think we started backwards. I think we actually should have worked [Med Rec] on the discharge end more so than the admission end because if you get all your ducks in a row at the beginning but then kind of let it go to pot in the end, has that time been well invested? So I think it [Med Rec] should have started at the discharge end and made sure we were sending these people home in the best possible way we could to be prepared, whether that was long term care or managing their own medications at home. To me that should have been . . . the primary starting place. But instead we started at the beginning, which is also important. (Hospital Pharmacist)

The theme of starting with Med Rec on discharge was echoed through other comments by participants who described implementation of the Med Rec process as both time consuming and resource intensive:

If you had to choose I'd have chosen [Med Rec at] the discharge end before [the admission end]. And just knowing how the health regions work, it's a long, long process to get to where you want to be. You know, we've been at this for years and we are only getting now to [Med Rec on] the discharge. (Hospital Pharmacist)

Even though the Med Rec process for patients transferred from acute care to long term care was described by participants as not yet perfectly executed, hope remains that,

In a perfect world I'd have Med Rec on every discharge and Med Rec on every admission. And [Med Rec on] transfers through facility as well, in a perfect world; very unrealistic, I think, to expect that. It would take a lot of people to do that. But who knows what the future will bring I guess. (Hospital Pharmacist)

With issues remaining, participants see potential for further improvements in Med Rec,

I think in the initial [Med Rec] roll-out process, notification [about a transfer] was a problem. Now we are getting notified, whether it's late or with sufficient notification. So that was an initial challenge, but it's improving. Physician signatures before we can fax to the community pharmacy. That's still an issue. Now whether or not they give us the capabilities to prescribe or to facilitate that process, you know, whether it's Level 1 prescribing . . . that could improve it as well. That's still an issue. (Hospital Pharmacist)

4.2 Summary

Health care providers who completed at least one step of the Med Rec process for patients transferred from urban acute care settings to urban long term care settings in a large health region in Saskatchewan shared their experiences with and perspectives on the process. There was consensus that the Med Rec process is an initiative that can contribute to safe, quality outcomes for patients when they transition from acute care to long term care. The Med Rec process was described as meeting the legal requirements for medication administration. Additional benefits identified included the potential for enhancing continuity of care and communication between care providers and venues of care.

Participants in this study identified challenges with the Med Rec process. It was challenging to meet the timelines of the Med Rec process when adequate notification of patient transfers was not provided. An additional challenge was obtaining the physician's signature on the Med Rec forms when the physician was not present at the acute care site from which the patient was being transferred. Participants also described the Med Rec process for patients transferred from acute care to long term care as an activity that affected and increased workload. This challenged limited health care provider resources to complete the Med Rec process within

the prescribed timelines. The factors of time, notification, workload, and limited resources played a major role in the completion of the Med Rec process.

Despite the challenges that were identified, participants described the positive features of the Med Rec process and offered suggestions as to how the process could work better if certain things were in place. The ability of acute care pharmacists to engage in Level 1 prescribing authority was described as an activity that would help with the challenge of obtaining the physician's signature on the Med Rec forms. Participants also identified areas of training for physicians and nurses that would better prepare those two care provider groups to play a greater role in the completion of the Med Rec process for patients transferred from acute care to long term care. The goal of preparing more health care providers to complete the Med Rec process was seen as an activity that would help share the workload associated with this process with the pharmacists who are predominantly involved with completion of the Med Rec process in this particular health region.

Factors such as capacity of health care providers and the interplay amongst the contexts of acute care, long term care, and community care (in the way of the involvement of community pharmacies) also influence completion of the steps of the Med Rec process (Appendix D).

CHAPTER FIVE – DISCUSSION AND IMPLICATIONS

5.0 Introduction

The purpose of this qualitative study was to explore and describe health care providers' experiences with and perspectives on the Med Rec process that was implemented for patients transferred from acute care to long term care facilities within an urban setting in a large health region in the province of Saskatchewan, Canada. The study participants included six pharmacists (three from hospital and three from community), two physicians (who practiced in both acute care and community), and two nurses (from long term care) who completed at least one step of the Med Rec process.

Participants generally agreed that Med Rec is an activity that facilitates continuity of care and safety for patients transferred between acute care and long term care. These findings support the purpose of Med Rec as an activity that can contribute to safe patient transitions (Barnsteiner, 2005; Kwan et al., 2013; Poole et al., 2006; Steeb & Webster, 2012). Participants did, however, identify challenges with the steps in the process which increased their workload or forced them to implement workarounds in order to complete the process. In addition, timely notification of a patient transfer from an acute care unit to long term care was not always received and this provided a barrier to completion of the steps of the Med Rec process.

Participants described challenges that interfered with smooth completion of the Med Rec process along with opportunities that could improve the process. Both challenges and opportunities related to the timing of the Med Rec process and the workload it presented to members of the patient's health care team.

5.1 The Use of a Qualitative Case Study

The Med Rec process is a complex process for patients transferred from acute care to long term care is comprised of several steps, involves different types of health care providers, and spans two venues of care. The qualitative case study method provided a useful strategy to gain an understanding of the perspectives and experiences of health care providers with the Med Rec process in the real life context (Stake, 2005; Yin, 2009) of the completion of the steps of the process.

It was helpful to visualize the Med Rec process as one case with the health care providers as the embedded units (Yin, 2009) who complete the steps of the process within the context of transition of a patient from acute care to long term care. The case study approach helped the researcher maintain a focus on the embedded units (the health care providers) instead of getting sidetracked by the other complexities of the Med Rec process such as the mechanics of the physical and administrative transfer of the patient between acute care and long term care. The case study method facilitated a focus on the experiences and perspectives of health care providers who completed a step of the Med Rec process.

A feature of the case study method is the use of multiple data sources to get an understanding of the case under study (Stake, 2005; Yin, 2009). In this research, additional data sources included consultations with key health region personnel involved with the development and implementation of the Med Rec process for patients transferred from acute care to long term care and related documents, materials, and audit information. These additional sources of data of the real life context of the Med Rec process were important for the researcher to develop as best as possible a complete look at the initiative as a whole (Stake, 2005; Yin, 2009). The use of

additional data sources helped the researcher focus participant recruitment and also helped inform the development of guiding questions for the digitally recorded participants' interviews.

In this research, additional data sources included the documented Med Rec process for patients transferred from acute care to long term care that the health region developed using the Plan Do Study Act (PDSA) cycle strategy (Appendix D). Study of the details of the process assisted with the identification of venues of care that were involved – acute care units, long term care facilities, and community pharmacies. The detailed process also identified the order of the steps that would contribute to safe transition of medication administration from acute care to long term care and the health care providers along the process who completed the steps. This helped inform the researcher where to focus the recruitment of participants for the digitally recorded interviews.

Other data sources included standardized forms developed for the Med Rec process, and memos and training materials (such as health region newsletter updates and an online voice over training PowerPoint presentation housed on the region's internal website) that were developed to educate health care providers about the implementation of the Med Rec process for patients transferred from acute care to long term care in the health region of study.

The researcher also included consultations with key health region personnel as a source of data to add to the understanding of the Med Rec process. This included pharmacists who guided the development of the Med Rec process and who supervised the implementation of the improvement initiative. The health region's Pharmacy Manager and Med Rec Pharmacist Lead were also instrumental in sharing key findings from the health region's audit of the Med Rec process for patients transferred from acute care to long term care. Audit information reported by the health region's Pharmacy Manager and Med Rec Pharmacist Lead, such as the locations

patients were transferred to and from, assisted the researcher to focus recruitment of participants for interviews. Consultations with health region staff about elements of the information they tracked such as the meeting of process timelines and key acute care units, long term care facilities, and region staff involved with the Med Rec process helped the researcher focus recruitment activities in the right places to achieve a sample that reflected the various health care providers that completed at least one step of the Med Rec process.

5.1.1 Recruitment of Participants

Recruitment of participants took longer than anticipated. Having worked in the health care field for many years, the researcher anticipated the potential need to sustain recruitment activities in order to recruit a sample that reflected the health care providers who completed a step of the Med Rec process. Health care settings and providers are busy. It can be challenging for health care providers to take time out of an already full day and busy workload to participate in a study that may not provide them any direct benefit.

Recruitment took nine months and was sustained throughout the period of data collection as described in Chapter 3. The researcher broadened efforts to recruit participants. This included repeated visits to site managers to distribute letters and posters of invitation and making use of a snowball technique – referral by a participant to one of their colleagues (Richards & Morse, 2007) – in addition to the purposive sample recruitment strategies. Four of the 10 participants were recruited through referral by one of their colleagues. A sample that reflected the health care providers who completed at least one step of the Med Rec process was achieved and the participants provided a rich description of their perspectives and experiences with the Med Rec process for patients transferred from acute care to long term care. It is interesting to

note, however, that the most challenging group to recruit was registered nurses, which will be discussed later on in this Chapter.

5.2 Discussion of the Findings and Study Themes

Med Rec is recognized as an intervention that reduces medication errors in care transitions (Chhabra, et al., 2012; Kwan et al., 2013; Poole et al., 2006) by providing accurate and consistent communication of a patient's medication administration across care settings (Institute for Safe Medication Practices Canada, September 2010). The themes that emerged in this study are linked to the data set and reflect congruence between health care providers' perspectives in this study and the goals of the Med Rec process. The participants provided responses to the researcher's questions from their perspectives, which are influenced by their background, experience, and education. Participants described their own experiences with and perspectives on the Med Rec process in the natural setting of their clinical practice.

There was general consensus that the Med Rec process facilitated both safety and continuity of care with medication administration for patients who transitioned from acute care to long term care. In addition, participants described challenges and benefits associated with the Med Rec process when patients are transferred from urban acute care units to long term care facilities in the health region of study.

5.2.1 Health Care Providers Involved in the Medication Reconciliation Process

Study participants described the health care providers who are involved in the Med Rec process across the three care settings of acute care, community, and long term care. Participants also identified that it is helpful for health care providers to have specialized knowledge to complete the steps of the Med Rec process. This finding is supported by Varkey et al. (2007) who found that the provision of education for health care providers, including RNs and medical

residents, to complete a comprehensive medication history contributed to a reduction in medication errors in the acute care setting.

Study participants verified that in the health region of study pharmacists and physicians from three care settings – acute care, community care, and long term care - and RNs from long term care complete at least one step of the Med Rec process for patients transferred from acute care to long term care. Participants described some team effort across the points of transition, acute care-community-long term care, in the completion of the Med Rec process. Team collaboration is supported as an important activity to help improve the quality of care transitions and safe outcomes for the patient (Kwan et al., 2013). Participants also identified that in the health region of study the onus of completion of the Med Rec process falls on the pharmacists in the acute care setting. This is congruent with empirical literature describing the impact of Med Rec on patient safety. Knez et al. (2011) outlined the major role of pharmacists in the enactment of the Med Rec process and in a support role for other health care providers even when RNs received additional education to complete the assessment components of Med Rec such as the Best Possible Medication History (BPMH). The significance of this rests with the dedication of resources and the workload that the Med Rec process presents for pharmacists in the acute care setting.

5.2.1.1 Registered nurses in acute care were absent from the process.

Although RNs are identified as one category of health care providers who could complete steps of the Med Rec process at the acute care end of the patient's transition (Appendix D), it was revealed through sample recruitment activities that in this particular health region of study RNs in acute care were not involved in the Med Rec process. This was a surprising discovery, but it is supported in the literature about Med Rec that identifies that pharmacists are typically

the health care provider group that complete the Med Rec process (Knez et al., 2011). It was also verified through personal communication with pharmacy personnel from the health region of study that the steps of the Med Rec process for patients in acute care that are being transferred to long term care are currently being completed by acute care pharmacists (C. Berry, personal communication May 3, 2016).

In the health region of study, RNs comprise the largest health care provider complement on acute care units in addition to being present in the clinical settings 24 hours a day and seven days a week (C. Coote, personal communication May 16, 2014). Given there are fewer pharmacists than RNs on an acute care unit, it would be helpful for the RN staff to be involved in completion of the Med Rec process. RNs could share in the workload with pharmacists to prepare the Med Rec forms for acute care patients transferred to long term care. Sharing of the workload would be particularly helpful when short notice of a patient transfer is received. RNs could prepare or begin to prepare the Med Rec forms to facilitate completion of the process within the prescribed timelines and perhaps provide a solution to pharmacists having to re-prioritize their work to accommodate short notice of a patient transfer to long term care. This strategy is supported by Varkey et al. (2007) who described the involvement of RNs in the reconciliation of patient medication lists on admission to an acute care setting with a double check by hospital pharmacists. This strategy enhanced safety and medication discrepancies and errors were reduced (Varkey et al, 2007). Fitzgibbon et al. (2013) and Pincus (2013) also support educating RNs to complete the Med Rec process particularly for vulnerable patients such as older adults.

In addition to sharing the workload associated with completion of the Med Rec process for patients transferred from acute care to long term care, RNs would also be sharing their

knowledge and expertise according to the Saskatchewan Registered Nurses Association (2015). In a guideline on the topic of medication management, the Saskatchewan Registered Nurses Association (2015) has identified the RN role in a decision –making framework for medication administration and management from a patient and family centered perspective. The guideline provides a resource to RNs by outlining the fundamental activities required for safe medication administration and management and links the fundamentals to the competencies for RNs in the province. The Saskatchewan Registered Nurses Association guideline (2015) for the RN role in medication management indicates that not only do RNs possess the knowledge and skill to complete the steps of Med Rec, but that RNs are also positioned to take a lead role in medication safety through Med Rec for patient transitions through the continuum of care (Saskatchewan Registered Nurses Association, 2015). The guidelines for RN management of medication administration and management, which includes completion of the Med Rec process for patients at points of transition, is congruent with current literature that outlines the benefit of the RN role to patients (Fitzgibbon et al., 2013; Pincus, 2013; Varkey et al., 2007).

5.2.1.2 Medication Reconciliation requires specialized knowledge.

The information shared by participants indicated that knowledge and skill is required to conduct a patient's comprehensive medication history, which is a step in the Med Rec process. Although an interprofessional approach to Med Rec is supported by the literature (Cornu et al., 2012; Poole et al., 2006; Steeb & Webster, 2012) and was described positively by participants, the findings indicated that pharmacists, because of their advanced knowledge and education in the area of medications and administration, could be the most appropriate health care provider to complete the Med Rec process. This was supported by the literature as well (Strunk et al., 2008).

All of the participants were able to identify the Med Rec process steps they completed for patients transferred from acute care to long term care. This suggests they have knowledge of the Med Rec process even if some did not have formal education about Med Rec in their undergraduate programs or formal orientation to the health region's Med Rec process.

It was suggested that RNs may not have the ability to complete the Med Rec process due to a lack of education and training in the skills required. Pincus (2013) argues that RNs have the capacity to do Med Rec with targeted education. There is an opportunity, therefore, to lessen the workload associated with the Med Rec process by promoting further education and training for other team members, particularly RNs. A needs assessment of nursing knowledge related to the Med Rec process will help determine requisite education and training for RNs.

5.2.2 The Medication Reconciliation Process is Beneficial

Study participants described the Med Rec process as being beneficial to both patients and health care providers. The steps and documents associated with the Med Rec process provided support to the health care providers completing the process. Using the Med Rec process for patients transferred from acute care to long term care facilitated safe quality outcomes in the area of medication administration.

5.2.2.1 Benefits for patients.

Participants identified that the Med Rec process contributes to continuity of care of medication administration for patients transferred from acute care to long term care. Any transition of a patient from one care setting to another has potential to produce discontinuity of care, which can be a safety issue for patient care outcomes (Arora & Farnan, 2008; Clancy, 2006; Coleman, 2003; Dusek et al., 2014; Magilvy & Congdon, 2000). Med Rec, as a safety initiative, has the potential to position safe, quality outcomes for patients at points of transition in

the health system (Kwan et al., 2013). There was consensus amongst the study participants that the Med Rec process, when executed according to the process outlined in Appendix D, benefits patients through continuity of safe medication administration.

It was revealed that in order to complete the Med Rec forms a comprehensive medication history is required (Kwan et al., 2013). Participants identified that this involves discussion with the patient or family if the patient is not able to participate. Since the focus of this study was on the perspectives and experiences of health care providers with the Med Rec process the patient and family perspective was not captured. Understanding the experience and perspective of the patient and family on the Med Rec process on transfer from acute care to long term care may reveal additional benefits not captured in the findings of this study.

5.2.2.2 Benefits for health care providers.

The standardized Med Rec process with its accompanying forms provides a template for health care providers to follow and complete. Streamlining the completion of the steps of the Med Rec process turns it into standard work, which contributes to efficiency and effectiveness as Med Rec is incorporated into the work health care providers do to transfer patients between acute care and long term care. The Med Rec process endures as standard work and the components can be completed routinely as patients are transferred. The standard work of the Med Rec process helps to provide a complete and comprehensive medication administration list for patients transferred from acute care to long term care without variation. This in itself has the potential to increase accuracy while reducing the time it takes to ensure completeness (Barnsteiner, 2005).

Enhanced communication between health care providers and across care settings is a key benefit of the Med Rec process. Communication of care is very important for the safe transition

of patients between care settings (Chhabra et al., 2012; Coleman, 2003; Coleman et al., 2002; Steeb & Webster, 2012). Health care providers benefit through the use of standardized forms and processes, which can connect them with the resources of colleagues at either end of the patient transition.

5.2.3 The Health Care System Provides the Challenges

The two major challenges identified by participants with the timely completion of the Med Rec process for patients transferred from acute care to long term care are caused by other factors in the health care system. Challenges encountered with the Med Rec process pertained to the timing of the notification of a patient transfer from acute care to long term care and the acquisition of the physician's signature on the Med Rec forms prior to transfer. Lack of adequate notice of a patient transfer coupled with delays in obtaining the physician's signature on the forms lead to extra work in an already increased workload particularly for hospital and community pharmacists and health care providers in the long term care setting.

5.2.3.1 Timing does not always meet the standard.

The timing of notification of the transfer of a patient from acute care to long term care was identified as a key driver that has an impact on the completion of the steps of the Med Rec process. Although at least 24 hours' notice of a transfer is the standard, pharmacist participants in the acute care setting reported that they often receive much shorter notice than is expected. Pharmacists in the acute care setting reported that they prioritized the completion of the Med Rec process for patients being transferred to long term care, but it was done at the expense of their other clinical work. The pharmacists also identified that given more notice, they may be able to involve the family more in the comprehensive medication history in cases where the patient may not be able to participate fully. Involving patients and families as active partners in the Med Rec

process can provide education and facilitate an increase in their knowledge about the medications they take (Varkey et al., 2007). Med Rec is an important activity because it can help ensure the patient and family are in possession of an up to date medication list each time they interact with health care providers, which could position the patient for safe medication administration (Gizzi et al., 2010; Varkey et al., 2007).

Not receiving adequate notice of a patient transfer from acute care to long term care also had implications for community pharmacists and the long term care setting. In order to ensure the patient's medications were delivered to the long term care facility prior to their admission, the community pharmacist sometimes had to institute workarounds to compensate for the short notice of the transfer. This required additional steps in communication to complete the steps of the Med Rec process. All of these extra steps require time and take the pharmacists away from other competing priorities in their work.

5.2.3.2 Required physicians' signatures are difficult to obtain.

The timing of the notification of the transfer of a patient from acute care to long term care is one factor that affects the ability to acquire a physician's signature on the Med Rec forms. The word "scrambling" was used by participants when describing the challenges of obtaining the physician's signature on the Med Rec forms. When the physician was not readily available to sign the Med Rec forms, health care providers, particularly pharmacists, used other strategies to obtain the physician's signature on the Med Rec forms. This could involve extra phone calls between the hospital pharmacist, physician's office, the community pharmacy, and the long term care facility.

At the time of this study, participants identified that pharmacists were just beginning to implement Level 1 prescribing authority (Saskatchewan College of Pharmacists, November

2014). In Saskatchewan, Level 1 prescribing authority is granted to licensed pharmacists who have completed the training requirements as outlined in the Regulatory Bylaws of the Saskatchewan College of Pharmacists (Saskatchewan College of Pharmacists, November 2014).

Level 1 prescribing by pharmacists completing the Med Rec process for patients transferred from acute care to long term care was described as a measure that could address the delays in completion of the process. Delays could be experienced when waiting for the physician to either sign the standardized documents at the acute care site or sign and fax the completed documents to the community pharmacy for preparation and delivery of the medications before the patient is admitted to the long term care facility.

5.2.4 A Consideration of the Findings using the Normalization Process Theory and the Extended Normalization Process Theory (General Theory of Implementation)

As a quality improvement activity to facilitate continuity of care with medication administration, the Med Rec process is considered complex (May, 2013; May et al., 2009; May et al., 2007; Murray et al., 2010). There are several steps that need to be completed by health care providers who have the knowledge, skill, and competencies to ensure the best possible medication history and list of current medications is entered onto standardized forms when patients are transferred from acute care to long term care.

Normalization Process Theory and the Extended Normalization Process Theory (general theory of implementation) can provide a framework to explain and understand the factors that influence the implementation of complex processes. In this study, the theoretical approach provided a good fit and was useful in assisting to explain the findings. The theoretical components each had relevance in terms of the study findings. The researcher considered these theories to help understand why health care providers do, or do not, embed what is regarded to

be best practice into complex clinical interventions. The participants' description of their knowledge of the Med Rec process revealed some interesting information that is supported by components of the Normalization Process Theory and the Extended Normalization Process Theory (general theory of implementation). Table 5 below summarizes suggested links between theory components presented in Table 2 (May, 2013; May & Finch, 2009; May et al., 2007; McEvoy et al., 2014; Murray et al., 2010) on page 18 of this document and study findings. Discussion follows.

Table 5. Summary of study findings linked to components of the theoretical framework

Theory Component	Study Finding
Potential – the ability of and support provided to health care providers to enact and be involved in an intervention	<i>Participants described having access to a standardized Med Rec process</i> <i>Participants described having access to standardized forms</i> <i>Short notice of a patient transfer has an impact on participants' workload</i>
Capacity – role expectation of health care providers, their knowledge of an intervention and system supports such as time and materials	<i>Participants had general knowledge about the Med Rec process but received limited formal education about and training for the Med Rec process</i> <i>Pharmacists take the lead on completion of the Med Rec process</i> <i>Acute care RNs are absent from the Med Rec process</i>
Capability – how the intervention is integrated as a process from a work perspective	<i>Pharmacists take the lead on completion of the Med Rec process</i> <i>Participants described having knowledge of the Med Rec process</i> <i>Physician signatures are challenging to obtain</i> <i>Level 1 prescribing helps complete the physician signature step</i>
Contribution – what health care providers actually do to implement an intervention	<i>Participants identified Med Rec as an intervention that facilitates medication safety, continuity of care, and efficiencies</i> <i>Participants complete steps of the Med Rec process</i> <i>Participants complete Med Rec documents</i>

5.2.4.1 Embedding the medication reconciliation process into practice.

When notification of a patient transfer from acute care to long term care was received, health care providers used the standardized Med Rec process and associated forms to facilitate the patient transfer. This activity suggests that the health care providers in this study have incorporated the Med Rec process for patient transfers into their practice. It also suggests that, for the most part, there are supports in place to assist with the completion of the Med Rec process. This is consistent with the components of the Med Rec process illustrated in Table 1 (p. 12 of this document) and reflects the summary of the link between theoretical components and study findings in Table 5 above. Challenges to these supports are health system deficiencies, such as delayed notification of patient transfers and lack of accessibility to physicians to provide Med Rec form authorization.

Lack of adequate notice of a patient transfer was identified as a health system issue that could contribute to delays or increased workload of health care providers completing the Med Rec process. Although participants identified that notification of transfers from acute care to long term care is improving, short notice continues to challenge the ability of particularly hospital pharmacists to plan their workload. It would be worthwhile for the health region of study to address system issues related to short notice of patient transfer from acute care to long term care to improve this step of the Med Rec process.

The use of work arounds to facilitate the acquisition of required physician signatures on the Med Rec forms is an activity that can serve to increase the effort it takes to complete the Med Rec process for patients transferred from acute care to long term care. Participants in this study also identified this as a source of frustration and a factor that delayed the completion of the Med

Rec process. In addition, work arounds necessitate a move away from the standardized Med Rec process which could impact medication safety and continuity.

The implementation of Level 1 prescribing, where either the pharmacist's or the physician's signatures on the Med Rec forms is accepted as a legal prescription, shows promise of reducing delays in completing the steps of the Med Rec process and reducing the time spent doing workarounds to get the physician's signature. The introduction of Level 1 prescribing shows promise in helping to address the acquisition of appropriate signatures on the Med Rec forms prior to a patient's discharge or transfer. Level 1 prescribing could provide a real solution to address delays and additional work related to ensuring Med Rec forms are completed appropriately and can be used as the legal prescription for medication administration when the patient transferred from acute care arrives at the long term care facility. This would, however, keep the onus on the hospital pharmacists to complete the Med Rec process and would not address the additional workload it provides. It would be worthwhile to review and clarify health care provider roles when Level 1 prescribing is being considered on an acute care unit to support the Med Rec process for patients transferred from acute care to long term care.

It was learned in this research that in the health region of study, RNs in the acute care setting are not involved in any steps of the Med Rec process. The researcher suggests that this is a health system issue that is not supportive of the enactment of the Med Rec process overall. Because the Med Rec workload in acute care is centred entirely on the pharmacists, a smaller number than RNs, it would seem intuitive that if RNs shared the workload of the Med Rec process with the hospital pharmacists, process delays could be reduced and pharmacists could prioritize their workloads to include the other important interventions and functions that they provide in their acute care practice. Further investigation is needed to determine how to RN

involvement at acute care sites in the Med Rec process for patients who are transferred from acute care to long term care. This could benefit workload distribution within the health care team, and potentially benefits patients and families by raising RN awareness of safe medication administration and management.

There was general agreement from the health care providers in this study that the Med Rec process facilitates safe medication administration and management and continuity of care. It is difficult to discern, however, whether providers complete the Med Rec process because of its intrinsic, professional value or because it is another externally mandated provincial and organizational requirement.

5.2.4.2 Capacity to complete the medication reconciliation process.

Overall, participants identified that they received little to no education in undergraduate programs on the concepts of the Med Rec process as a safety intervention. In addition, participants identified that they did not receive formal education or orientation in the health region of study when the Med Rec process for patients transferred from acute care to long term care was implemented. And yet, health care providers involved in the Med Rec process were able to identify the step they completed and the benefits of the Med Rec process for patients. This suggests that there is capacity for health care providers to enact the Med Rec process for patients who are transferred, even with a reported lack of formal education on or orientation about the process.

Participants' ability to complete the Med Rec process for patients being transferred from acute care to long term care may have been influenced by previous experience with Med Rec in the health region of study. As part of the strategy to implement Med Rec, the first step was for patients admitted to the acute care setting. Participants mentioned their work with the Med Rec

process for patients admitted to acute care. It could be possible that knowledge or experience with Med Rec on admission for that group of patients provided some informal education and orientation for health care providers to enact the Med Rec process for patients being transferred to long term care. This is interesting; however, more needs to be known about health care providers' knowledge level of the Med Rec process, in general, before any contributing factors to knowledge and understanding about the Med Rec process can be suggested.

The lack of involvement of acute care RNs in the Med Rec process for patients transferred to long term care may suggest a knowledge deficit about the steps of the Med Rec process for this group of health care providers in particular. This could affect acute care RNs' capacity to be involved in the Med Rec process. This, in turn, could affect the embedding of the process into the practice of the acute care nurses. It was verified through personal communication with pharmacy personnel from the health region of study that acute care pharmacists currently complete the steps of the Med Rec process for patients that are transferred from acute care to long term care (C. Berry, personal communication May 3, 2016). Reasons for the lack of participation of acute care RNs was not provided.

Another factor that may influence the non-participation of acute care nurses could relate to the roles of health care provider groups in the acute care setting. The Med Rec process focuses on the clinical area of medication administration, which could be perceived to be within the domain of the hospital pharmacists. Hospital pharmacist study participants offered that it would be helpful for the management of the workload associated with the Med Rec process when patients are transferred to long term care if acute care nurses were involved. The pharmacists also indicated, however, that the nurses were too busy and did not possess the knowledge to contribute to completion of the steps of the Med Rec process. In any case, it seems

that RNs in acute care do not or have not incorporated involvement in the Med Rec process into their clinical role. The researcher suggests that this phenomenon of RNs not being involved in the Med Rec process could be a health system issue that requires more investigation particularly in light of the direction provided in the Saskatchewan Registered Nurses Association guideline (2015) for the RN role with medication administration and management, including Med Rec.

Given that RNs in the acute care setting are not involved in the completion of steps of the Med Rec process for patients being transferred to long term care, it would seem there is a disconnect between what is outlined in the health region of study's procedure and what is actually happening at the point of care. It would be worthwhile for the health region of study to review the roles of health care providers in the completion of the Med Rec process for patients who are transferred from acute care to long term care with intent to maximize the contribution of all health care providers, including RNs in acute care settings.

5.2.4.3 Capability to incorporate medication reconciliation as standard practice.

The manner in which the Med Rec process was implemented in the health region of study may have influenced the embedding of the improvement activity into health care providers' practices. Participants described having some awareness about the implementation of the Med Rec process for patients being transferred from acute care to long term care through mechanisms that included print or verbal notification and introduction of associated Med Rec process forms.

Participants described knowing that the Med Rec process was to be implemented on a certain date for patients being transferred from acute care to long term care, but they did not recall the lead up to the implementation and shared that they were not a part of the development of this Med Rec process.

Although the Med Rec process for patients transferred from acute care to long term care was developed through a plan-do-study-act (PDSA) cycle lead by the health region's pharmacy staff, it is not known how many health care providers at the point of care were involved prior to implementation. Vogelsmeier et al. (2013) reported in their qualitative study about health care providers' perceptions of the Med Rec process, that the issues of clarity of the purpose of Med Rec and the roles of clinician groups were identified as key. Participants in the study reported in this dissertation described their experiences with work-arounds to obtain required physician signatures and the frustration of inadequate notice of patient transfers from acute care to long term care. Perhaps these two challenges could be addressed through the involvement of health care providers at the point of care who would be responsible for the completion of the Med Rec process for patients transferred from acute care to long term care.

5.2.4.4 Summary

The Med Rec process used in the health region of study for patients transferred from acute care to long term care shows congruence with the components of the Med Rec process described in current literature as displayed in Table 1 on page 12 of this document. Health care providers have access to the supports they need, such as a comprehensive medication list, standardized forms, and the patient and family, to complete the Med Rec process.

Although the types of health care providers and the activities they undertake to complete the Med Rec process are identified, participants in this study indicated it does not always work at the point of care in accordance with what is outlined in the Med Rec process in the health region of study. Advance notification of patient transfers is not always provided and health care providers, particularly the pharmacist groups, have to resort to work arounds when the appropriate physician is not available to provide the required signatures on the Med Rec forms.

In addition, although RNs are identified both in the literature about the Med Rec process and in the health region of study Med Rec process as being included in the list of health care providers who can complete the Med Rec process, acute care RNs are absent from the process in the health region of study. Although participants identified that perhaps RNs do not have the knowledge needed to complete the Med Rec process, the Saskatchewan Registered Nurses Association (2015) identifies that not only do RNs have the knowledge, skill, and competency, RN interventions such as with Med Rec can be key to safe medication administration and management. This gap suggests an opportunity for the health region of study to review the roles of health care providers in order to maximize the scopes of practice.

Despite these challenges and what the participants described to be a deficit in formal education about and orientation to the Med Rec process for patients transferred from acute care to long term care, the health care providers in this study identified Med Rec as an intervention that can position patients for safe medication administration and continuity of care at points of transition in the health system. That the participants described the steps of the Med Rec process they completed suggests an embedding of this safety intervention into practice. However, because Med Rec has been identified as an activity that the health care provider must engage in, it is difficult to conclude that the Med Rec process is fully embedded into practice versus being completed as a requirement of the health care providers' role.

5.3 Strengths and Limitations of the Study

The study design and execution of the study produced both strengths and limitations for transferability of the study findings. A more detailed discussion of both strengths and limitation is provided below.

5.3.1 Strengths

The use of the embedded single case study design did result in the collection of data on health care provider's experiences with and perspectives on the Med Rec process for patients transferred from urban acute care to urban long term care settings in the health region of study. The thematic analysis of the data resulted in a rich description of the study participants' perceptions of the challenges and opportunities with the Med Rec process.

The study sample included the health care providers, as identified in Appendix D, who completed at least one step of the Med Rec process. This accurate reflection of health care providers, along with saturation of data, provides the potential for the findings to reflect the perspectives and experiences of health care providers involved with the Med Rec process in the health region of study. In addition, the range of professional experience of the participants, from two years to over 30 years, suggests that both newer and more experienced health care providers are a part of the sample. This diversity in years of experience reflects the various health care providers who implement the Med Rec process and adds strength to the make-up of the study sample (Stake, 2005; Yin, 2009).

The researcher conducted all of the participant interviews and analyzed all of the interview and health region Med Rec document data. This, in addition to the use of semi-structured interview questions, provided consistency in data collection and analysis. Analysis of the qualitative data also revealed that there was consensus amongst participants regarding the benefits and challenges of the Med Rec process for patients transferred between acute care and long term care facilities and this consistency in participants' perspectives provided the themes for this study. Consistency was also provided through transcription of digitally recorded interviews by one single transcription service.

The researcher used additional measures to enhance the trustworthiness of the research. This included the maintenance of a detailed audit trail and field notes, and the ongoing tracking of data collection and data sources (Yin, 2009). The researcher also used the techniques of personal note taking and the involvement of another researcher with expertise in qualitative methods but not in the content area of the research in the analysis of the first interview to check for any subjective bias by the researcher.

The consideration of Normalization Process Theory and the Extended Normalization Process Theory (general theory of implementation) provided a theoretical framework through which to understand and suggest explanations for the storyline presented by the participants in the study. The use of a theoretical framework provided a starting point for an understanding of the participants' experiences with and perspective of the Med Rec process for patients transferred from acute care to long term care. It is possible that this approach will assist with the transferability of the findings of this study.

5.3.2 Limitations

The Med Rec process itself is complex and the complexity of Med Rec as a single case increases in that the context of the process crosses three care settings (acute care units, long term care facilities, and community pharmacies) with numerous different health care providers from varying professional backgrounds involved in completing the steps of the process. Although the case study design offers an approach where multiple sources of data can be used to understand the case of study (Yin, 2009), it is possible that this study may not be all encompassing of the Med Rec process because of its' complexity. The case study approach may not have captured the precise details of each health care provider's activities when performing a step of the Med Rec process. For these reasons, transferability of the findings of the study may be limited

(Boblin et al., 2013; Stake, 2005; Yin, 2009). Because the intent was to gain an overall understanding of the perspectives of the health care providers, the method chosen for this study could be considered to be a good fit.

In using a purposive sampling technique, there is a possibility that health care providers with a particular interest in the topic being studied are over-represented (Polit & Beck 2012). There is a chance that the pharmacists, physicians, and nurses who agreed to participate in this research did so because of a personal or professional interest in and agreement with the Med Rec process being studied. Because both benefits and challenges with the Med Rec process were identified by participants, even with a possible influence of participant self-selection, the data suggest a balanced view of the perspectives and experiences of the health care providers with the Med Rec process.

Because the findings of this study focused specifically on a quality improvement process (Med Rec on transfer from acute care to long term care) in one health region, transferability of the findings may be limited. The methodology used to conduct the study, however, may be useful in the study of other complex processes in the health care system. The case study method provides a good strategy to explore various factors within a complex process for the purpose of contributing to an understanding of the interaction and meaning of the process being studied (Stake, 2005; Yin, 2009).

5.4 Next Steps

Med Rec is becoming standard best practice in acute care, long term care, the community, and at points of transition between. Information about the perspectives and experiences of health care providers with the Med Rec process are limited. The researcher expects that there will be an interest in the findings of this exploratory qualitative study. This

research provides an opportunity to share the findings with the health region of study and beyond.

5.4.1 Dissemination

Participants indicated their interest in receiving information about the findings of the study. As part of dissemination activities, the researcher will forward a summary of the findings to each participant. In addition, the researcher will offer to provide a report back to the health region of study with a focus on Pharmacy Services. The researcher will also explore opportunities to provide a report back of the findings to other interested groups, including the senior leadership group in the health region of study.

Although the research was focused in one health region in the province of Saskatchewan, other health regions and the Ministry of Health may be interested in the findings of this study. The researcher will explore opportunities with other health regions and the Ministry of Health in the province to see if there is an interest in hearing about the findings of the study.

The findings of the study reflect the need for more education in the nursing, medicine, and pharmacy undergraduate health sciences programs on the Med Rec process and on skill acquisition with the performance of a best possible medication history. The researcher will explore opportunities to present the findings of the study to faculty who are responsible for the development of curriculum in undergraduate health sciences education programs.

Other more generalized venues for dissemination of the findings of the study, such as at a yearly provincial quality improvement summit and publications in pharmacy, quality improvement, and nursing journals will be pursued.

5.5 Implications and Conclusions

The findings of this study can be used to inform health sciences undergraduate and continuing education; current best practice in the area of continuity and safety of medication administration at points of patient transition; and further research aimed at gaining a deeper understanding of the Med Rec process and interventions that position safe, quality outcomes for patients with medication administration. In addition, building an understanding of the role of the patient and family and their experiences with interventions to facilitate continuity of medication administration care would add to the findings of this study, which illustrated the perspectives and experiences of health care providers with the Med Rec process when patients are transferred from acute care to long term care.

5.5.1 Implications for Health Sciences Education

If not already part of the health sciences curriculum, Med Rec should be presented as an important intervention that all health care providers can engage in to position safe quality outcomes for patients at points of transition in health care. Acquisition of the concepts of Med Rec as a patient safety intervention and knowledge, skill, and competency to complete a comprehensive medication assessment and Best Possible Medication History (BPMH) will assist to prepare health sciences students to accurately complete the Med Rec process in practice. This ability will be helpful to patients to facilitate safety and continuity with medication administration. It will also be helpful to health sciences students to prepare them to involve the patient and family in the creation of the medication history thereby including the patient and family in their own care.

It would also be helpful to include the role of the health care team in health sciences curriculum education about the concepts and components of the Med Rec process as an

important patient safety intervention. Education that places a focus on the contribution of the interprofessional team in safe, quality outcomes for patients could begin to provide the foundation for team collaboration at the point of care (Laugaland, Aase & Barach, 2012; Varkey et al., 2007; Vogelsmeir et al., 2013). Establishing the opportunities for team collaboration in undergraduate health sciences education may assist with carryover of these important connections when new health care providers begin their practice in the health care system.

5.5.2 Implications for Practice

Med Rec is completed for patients who are admitted to acute care and to long term care and for patients who are transferred between acute care and long term care. The findings of this study suggest that Med Rec should be completed for patients at all points of transition in the health care system, which is congruent with current literature (Barnsteiner, 2005; Kwan et al., 2013; Pincus, 2013; Steeb & Webster, 2012).

The health region of study is proceeding through a planned schedule of implementation of the Med Rec process at points of admission, transfer, and discharge (C. Coote, C. Richter, personal communications May 6, 2013; C. Coote, C. Richter, A. Wiebe, personal communications October 16, 2013; C. Berry, personal communication May 3, 2016). Med Rec on admission to acute care was first implemented in 2007, followed by Med Rec for patients transferred from acute care to long term care in 2013 (the basis for the topic of this study). The health region's plans include the implementation of Med Rec for the points of care transitions from acute care to home care, discharge from acute care and ambulatory care, and for transfers within the hospitals in the health region (C. Coote, C. Richter, personal communications May 6, 2013; C. Berry, personal communication May 3, 2016).

Participants suggested that the completion of Med Rec would improve communication and continuity of care and, in the case of patients being discharged to their own home or into the care of family or a personal care home, would also help involve and prepare the patient and family to manage their own care. This would fit with the health region's plan to implement the Med Rec process at all points of transition.

Participants described the efforts of the health care team in completing the steps of the Med Rec process. They acknowledged the role of various health care professions' roles in the Med Rec process without a great deal of detail as to how team collaboration could enhance the completion of the intervention. There could be opportunities to explore improved communication and continuity of care at the point of care through enhanced team and interprofessional collaboration, which would ultimately benefit patients and families (Clancy, 2006; Parry et al., 2003; Steeb & Webster, 2012; Sullivan et al., 2005; Van Sluisveld et al., 2012; Varkey et al., 2007; Vogelsmeir et al., 2013).

5.5.3 Implications for Further Research

The findings of the study suggest further areas that could be the focus of research when the Med Rec process is used for patients who are transferred from acute care to long term care.

- The patient and family experience with the Med Rec process;
- The perspectives of health care providers when patients are transferred from urban acute care to rural long term care facilities;
- The perspectives of health care providers when Level 1 prescribing is in place in the acute care setting;
- The perspectives of health care providers in a comparative study of two acute care units where Level 1 prescribing is in place on one unit and not the other;

- The differences in audit outcomes and health care provider experiences when Level 1 prescribing is in place or not in place;
- A comparative study of two acute care units where there is no Level 1 prescribing in place and nurses on one of the units have received education in Best Possible Medication History (BPMH)
 - The perspectives of health care providers;
 - The differences in audit outcomes.

5.6 Conclusion

Med Rec is a safety mechanism that when used at the point of patient transfer or transition to another care setting, has the potential to promote seamless care in the area of medication administration and management. Even when faced with delays or challenges, the participants in this study described completing the steps of the Med Rec process for patients transferred between acute care and long term care despite having to implement workarounds at times to facilitate a safe transfer.

The findings of the study added to the limited body of knowledge about the Med Rec process, specifically some perspectives of health care providers who are involved with the quality improvement initiative for patients who are transferred between urban acute care and urban long term care facilities. The findings contribute to recommendations that can be applied at the point of care to facilitate safe patient transfers when patients are transferred between different locations of care (Coleman, et al., 2002) and to recommendations for undergraduate health science education. In addition, the study provided increased knowledge about the contribution of health care providers to the quality improvement initiative known as the Med Rec process, which, through the use of a formalized complete and accurate information summary has

the potential to reduce errors that lead to adverse events thereby reducing harm to patients transferred between acute and long term care settings (Institute for Safe Medication Practice Canada, March 2012).

Finally, the researcher proposes that the results of the study may shed light on factors that facilitate or provide challenges to the enactment of the Med Rec process by health care providers (Luck et al., 2006; Stake, 2005; Yin, 2009).

References

- Accreditation Canada, Canadian Institute for Health Information, Canadian Patient Safety Institute & Institute for Safe Medication Practices Canada. (2012). Medication reconciliation in Canada: Raising the bar – Progress to date and the course ahead. Ottawa, ON: Accreditation Canada.
- Annis, T.D. (2002). The Synergy model in practice: The interdisciplinary team across the continuum of care. *Critical Care Nurse*, 22(5), 76-79.
- Arora, V.M., & Farnan, J.M. (2008). Care transitions for hospitalized patients. *The Medical Clinics of North America*, 92, 315-324.
- Baker, G.R., Norton, P.G., Flintoft, V., Blais, R., Brown, A., Cox, A. Etchells, E., Ghali, W.A., Hebert, P., Majumdar, S.R., O'Beirne, M., Palacios-Derflingher, L., Reid, R.J., Sheps, S. & Tamblyn, R. (2004). The Canadian Adverse Events Study: The incidence of adverse events among hospital patients in Canada. *CMAJ*, 170(11), 1678-1686.
- Barnsteiner, J.H. (2005). Medication reconciliation. Transfer of medication information across settings – keeping it free from error. *The American Journal of Nursing*, March, Supplement, 31-36.
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), 544-559.
- Boblin, S.L., Ireland, S., Kirkpatrick, H., & Robertson, K. (2013). Using Stake's qualitative case study approach to explore implementation of evidence-based practice. *Qualitative Health Research*, 23(9), 267-275.
- Boling, P.A., (2009). Care transitions and home health care. *Clinical Geriatric Medicine*, 25, 135-148.

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.
- Canadian Nurses Association. (2012). National Expert Commission: A nursing call to action. The health of our nation, the future of our health system. Retrieved from <http://expertcommission.cna-aiic.ca/>.
- Chhabra, P.T., Rattinger, G.B., Dutcher, S.K., Hare, M.E., Parsons, K.L., & Zuckerman, I.H. (2012). Medication reconciliation during the transition to and from long-term care settings: A systematic review. *Research in Social and Administrative Pharmacy*, 8, 60-75.
- Clancy, C.M. (2006). Care transitions: A threat and an opportunity for patient safety. *American Journal of Medical Quality*, 21(6), 415-417.
- Climente-Marti, M., Garcia-Manon, E.R., Artero-Mora, A., & Jimenez-Torres, N.V. (2010). Potential risk of medication discrepancies and reconciliation errors at admission and discharge from an inpatient medical service. *The Annals of Pharmacotherapy*, 44, 1747-1754.
- Coleman, E.A. (2003). Falling through the cracks: Challenges and opportunities for improving transitional care for persons with continuous complex care needs. *Journal of the American Geriatrics Society*, 51, 549-555.
- Coleman, E.A., Smith, J.D., Frank, J.C., Eilertsen, T.B., Thiare, J.N., & Kramer, A.M. (2002). Development and testing of a measure designated to assess the quality of care transitions. *International Journal of Integrated Care*, 2(1), 1 – 9.
- Cornu, P., Steurbaut, S., Leysen, T., De Baere, E., Ligneel, C., Mets, T., & Dupont, A.G. (2012). Effect of medication reconciliation at hospital admission on medication discrepancies

- during hospitalization and a discharge for geriatric patients. *The Annals of Pharmacotherapy*, 46, 484-494.
- Creswell, J.W., & Clark, V.L.P. (2011). *Designing and conducting mixed methods research*. (2nd ed.), Thousand Oaks, CA: Sage Publications Inc.
- Davidoff, F. (2009). Heterogeneity is not always noise. Lessons from improvement. *JAMA*, 302(23), 2580-2586.
- Donabedian, A. (1966). Evaluating the quality of medical care. *Millbank Memorial Fund Quarterly*, 44(3), 166-206.
- Dusek, B., Pearce, N., Harripul, A., & Lloyd, M. (2014). Care transitions. A systematic review of best practices. *Journal of Nursing Care Quality*, 00(00), 1-7.
- Eccles, M.P., Hrisos, S., Francis, J., Kaner, E.F., Dickinson, H.O., Beyer, F., & Johnston, M. (2006). Do self-reported intentions predict clinicians' behaviour: A systematic review. *Implementation Science*, 1(28), 1-10.
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 1-11.
- Fitzgibbon, M., Lorenz, R., & Lach, H. (2013). Medication reconciliation. Reducing risk for medication misadventure during transition from hospital to assisted living. *Journal of Gerontological Nursing*, 39(12), 22-29.
- Gagnon, Y-C. (2010). *The case study as a research method. A practical handbook*. Quebec, QUE: Presses de L'Universite' du Quebec.

- Gizzi, L.A., Slain, D., Hare, J.T., Sager, R., Briggs, F., & Palmer, C.H. (2010). Assessment of a safety enhancement to the hospital medication reconciliation process for elderly patients. *The American Journal of Geriatric Pharmacotherapy*, 8(2), 127-135.
- Goeschel, C.A., Weiss, W.M., & Pronovost, P.J. (2012). Using a logic model to design and evaluate quality and patient safety improvement programs. *International Journal for Quality in Health Care*, 24(4), 330-337.
- Government of Saskatchewan Ministry of Health (2012-13). Annual Report. Retrieved from www.finance.gov.sk.ca/PlanningAndReporting/2012-13HealthAnnualReport.pdf.
- Grol, R., Berwick, D., & Wensing, M. (2008). On the trail of quality and safety in health care. *BMJ*, 336, 74-76.
- Hickman, L., Newton, P., Halcomb, E.J., Change, E., & Davidson, P. (2007). Best practice interventions to improve the management of older people in acute care settings: A literature review. *Journal of Advanced Nursing*, 60(2), 113-126.
- Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-study research. *Nurse Researcher*, 20(4), 12-17.
- Institute for Healthcare Improvement. (2013). *Science of improvement: Testing changes*. Retrieved from www.ihl.org/knowledge/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx.
- Institute for Safe Medication Practices in Canada (ISMP) for Safer Healthcare Now! (March 2012). Medication reconciliation in long term care: Getting started kit. Retrieved from www.ismp-canada.org.

- Institute for Safe Medication Practices in Canada (ISMP) in collaboration with CHSP Ontario Branch. (September 2010). Roundtable Report. Optimizing communication about medications at transitions of care in Ontario. Retrieved from www.ismp-canada.org.
- Kaboli, P.J., Hoth, A.B., McClimon, B.J., & Schnipper, J.L. (2006). Clinical pharmacists and inpatient medical care. A systematic review. *Archives of Internal Medicine*, 166, 955-964.
- Knez, L., Suskovic, S., Rezonja, R., & Laaksonen, R. & Mrhar, A. (2011). The need for medication reconciliation: a cross-sectional observational study in adult patients. *Respiratory Medicine*, 105(S1), 560-566.
- Knisely, M.R., Bartlett Ellis, R.J., & Carpenter, J.S. (2015). Complexities of medication management across care transitions. A case report. *Clinical Nurse Specialist*, E1-E7.
- Kwan, J.L., Lo, L., Sampson, M., & Shojania, K.G. (2013). Medication reconciliation during transitions of care as a patient safety strategy. A systematic review. *Annals of Internal Medicine*, 158, 397-403.
- Laugaland, K., Aase, K., & Barach, P. (2012). Interventions to improve patient safety in transitional care – a review of the evidence. *Work*, 41(1), 2915-2924.
- Luck, L., Jackson, D., & Usher, K. (2005). Case study: a bridge across the paradigms. *Nursing Inquiry*, 13(2), 103-109.
- Magilvy, J.K., & Congdon, J.G. (2000). The crisis nature of health care transitions for rural older adults. *Public Health Nursing*, 17(5), 336-345.
- Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Forum: Qualitative Social Research*, 11(3), Article 8.

- May, C. (2013). Towards a general theory of implementation. *Implementation Science*, 8(18), 1-14.
- May, C., & Finch, T. (2009). Implementing, embedding, and integrating practices: An outline of Normalization Process Theory. *Sociology*, 43(3), 535-554.
- May, C., Finch, T., Mair, F., Ballini, L., Dowrick, C., Eccles, M., Gask, L., Macfarlane, A., Murray, E., Rapley, T., Rogers, A., Treweek, S., Wallace, P., Anderson, G., Burns, J., & Heaven, B. (2007). Understanding the implementation of complex interventions in health care: The normalization process model. *BMC Health Services Research*, 7(148), 1-7.
- May, C.R., Mair, F., Finch, T., MacFarlane, A., Dowrick, C., Treweek, S., Rapley, T., Ballini, L., Ong, B.N., Rogers, A., Murray, E., Elwyn, G., Légaré, F., Gunn, J., & Montori, V.M. (2009). Development of a theory of implementation and integration: Normalization Process Theory. *Implementation Science*, 4(29), 1-9.
- McEvoy, R., Ballini, L., Maltoni, S., O'Donnell, C.A., Mair, F.S., & MacFarlane, A. (2014). A qualitative systematic review of studies using the normalization process theory to research implementation processes. *Implementation Science*, 9(2), 2-13.
- Moore, C., Wisnivesky, J., Williams, S., & McGinn, T. (2003). Medical errors related to discontinuity of care from an inpatient to an outpatient setting. *Journal of General Internal Medicine*, 18, 646-651.
- Morse, J.M. (2012). *Qualitative health research. Creating a new discipline*. Walnut Creek, CA: Left Coast Press Inc.
- Mueller, S.K., Cunningham Sponsler, K., Kripalani, S., & Schnipper, J.L. (2012). Hospital-based medication reconciliation practices. A systematic review. *Archives of Internal Medicine*, 172(14), 1057-1069.

- Murray, E., Treweek, S., Pope, C., MacFarlane, A., Ballini, L., Dowrick, C., Finch, T., Kennedy, A., Mair, F., O'Donnell, C., Ong, B. N., Rapley, T., Rogers, A. & May, C. (2010). Normalisation process theory: A framework for developing, evaluating, and implementing complex interventions. *BMC Medicine*, 8(63), 1-11.
- Naylor, M.D. (2012). Advancing high value transitional care. The central role of nursing and its leadership. *Nursing Administration Quarterly*, 36(2), 115-126.
- Paparella, S. (2006). Medication reconciliation: Doing what's right for safe patient care. *Journal of Emergency Nursing*, 32(6), 516-520.
- Parry, C., Coleman, E.A., Smith, J.D., Frank, J., & Kramer, A.M. (2003). The care transitions intervention: A patient centered-approach to ensuring effective transfers between sites of geriatric care. *Home Health Care Services Quarterly*, 22(3), 1-17.
- Patton, M.Q. (2008). *Utilization-focused evaluation*. (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Pharmaceutical Information Program. Retrieved from <http://www.ehealthsask.ca/services/pip/Pages/pip.aspx>.
- Pincus, K. (2013). Transitional care management services. Optimizing medication reconciliation to improve the care of older adults. *Journal of Gerontological Nursing*, 39(10), 10-15.
- Pippins, J.R., Gandhi, T.K., Hamann, C., Ndumele, C.D., Labonville, S.A., Diedrichsen, E.K., Carty, M.G., Karson, A.S., Bhan, I., Coley, C.M., Liang, C.L., Turchin, A., McCarthy, P.C., & Schnipper, J.L. (2008). Classifying and predicting errors of inpatient medication reconciliation. *Journal of General Internal Medicine*, 23(9), 1414-1422.

- Polit, D.F., & Beck, C.T. (2012). *Nursing research: Generating and assessing evidence for nursing practice*. (9th ed.). Philadelphia, PA. Wolters Kluwer/Lippincott Williams & Wilkins.
- Poole, D.L., Chainakul, J.N., Pearson, M., & Graham, L. (2006). Medication reconciliation: A necessity in promoting a safe hospital discharge. *Journal for Healthcare Quality*, 28(3), 12-19.
- Rangachari, P., Rissing, P., & Rethemeyer, K. (2013). Awareness of evidence-based practices alone does not translate to implementation: Insights from implementation research. *Quality Management in Health Care*, 22(2), 117-125.
- Richards, L., & Morse, J.M. (2007). *Read me first for a user's guide to qualitative methods*. Sage Publications, Inc., Thousand Oaks, CA.
- Sanchez, S.H., Sethi, S.S., Santos, S.L., & Bookvar, K. (2014). Implementing medication reconciliation from the planner's perspective: A qualitative study. *BMC Health Services Research*, 14(290), 1-10.
- Sandelowski, M. (1986). The problem of rigor in qualitative research. *Advances in Nursing Science*, 8(3), 27-37.
- Saskatchewan College of Pharmacists. (November 2014). Regulatory bylaws of the Saskatchewan College of Pharmacists. Retrieved from www.saskpharm.ca/site/legislationauth.
- Saskatchewan Registered Nurses Association (September 2015). Medication management for RNs: A patient centered decision-making framework. Retrieved from www.srna.net.
- Saskatoon Health Region Annual Report 2011-12. Retrieved from www.saskatoonhealthregion.ca/about_us/documents/shr_annual_report_2011_12.pdf.

- Shojania, K.G. & Grimshaw, J.M. (2005). Evidence-based quality improvement: The state of the science. *Health Affairs*, 24(1), 138-150.
- Squires, J.E., Suh, K.N., Linklater, S., Bruce, N., Gartke, K., Graham, I.D., Karovitch, A., Read, J., Roth, V., Stockton, K., Tibbo, E., Woodhall, K., Worthington, J., & Grimshaw, J.M. (2013). Improving physician hand hygiene compliance using behavioral theories: A study protocol. *Implementation Science*, 8(16), 1-9.
- Stake, R.E. (2005). Qualitative case studies. In N.K. Denzin & Y.S. Lincoln (Eds.), *The Sage handbook of qualitative research*, 3rd edition, (pp. 443-466). Thousand Oaks, CA: Sage Publications.
- Steeb, D., & Webster, L. (2012). Improving care transitions: Optimizing medication reconciliation. *Journal of the American Pharmacists Association*, 52(4), e43-e52.
- Strunk, L.B., Matson, A.W., & Steinke, D. (2008). Impact of a pharmacist on medication reconciliation on patient admission to a Veterans Affairs Medical Center. *Hospital Pharmacy*, 43(8), 643-649.
- Sullivan, C., Gleason, K.M., Rooney, D., Groszek, J.M., & Barnard, C. (2005). Medication reconciliation in the acute care setting. Opportunity and challenge for nursing. *Journal of Nursing Care Quality*, 20(2), 95-98.
- Tuckett, A.G. (2005). Applying thematic analysis theory to practice: A researcher's experience. *Contemporary Nurse*, 19, 75-87.
- Van Sluisveld, N., Zegers, M., Natsch, S., & Wollersheim, H. (2012). Medication reconciliation at hospital admission and discharge: Insufficient knowledge, unclear task allocation and lack of collaboration as major barriers to medication safety. *BMC Health Services Research*, 12(170), 1-12.

- Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences*, 15, 398-405.
- Varkey, P., Cunningham, J., O'Meara, J., Bonacci, R., Desai, N., & Sheeler, R. (2007). Multidisciplinary approach to inpatient medication reconciliation in an academic setting. *American Journal of Health-System Pharmacists*, 64, 850-854.
- Vogelsmeir, A., Pepper, G.A., Odera, L., & Weir, C. (2013). Medication reconciliation: A qualitative analysis of clinicians' perceptions. *Research in Social and Administrative Pharmacy*, 9, 419-430.
- Walshe, K. (2007). Understanding what works – and why – in quality improvement: the need for theory-driven evaluation. *International Journal for Quality in Health Care*, 19(2), 57-59.
- Wolf, Z.R. (2003). Exploring the audit trail for qualitative investigations. *Nurse Educator*, 28(4), 175-178.
- Yin, R.K. (2009). *Case study research. Design and methods*. 4th Ed. Thousand Oaks, CA: Sage Publications, Inc.
- Zucker, D.M. (2009). How to do case study research. *School of Nursing Faculty Publication Series*, Paper 2; University of Massachusetts: Amherst.

Appendix A

Summary of Literature Review

Reference	Topic	Type of Study/Purpose of Article	Findings
Reports on Quantitative Research			
Moore, Wisnivesky, Williams & McGinn (2003)	Medical errors that are related to discontinuity of care when patient transitioned from acute care to outpatient.	Quantitative chart review to count three types of medical errors – medication continuity, test follow-up, work-up to link to re-hospitalization.	Almost half of the patients experienced at least 1 medical error that contributed to re-hospitalization in 3 months post-transition.
Baker, Norton, Flintoft, Blais, Brown, Cox, Etchells, Ghali, Hebert, Majumdar, O'Beirne, Palacios-Derflingher, Reid, Sheps, & Tamblyn (2004).	The Canadian Adverse Events Study	Randomly chosen Canadian hospitals, retrospective chart review of targeted adverse events for patients. Over 3,500 charts reviewed.	7.5% of 100 hospital admissions had at least one adverse event. Included, but not specific to, medication errors.
Varkey, Cunningham, O'Meara, Bonacci, Desai & Sheeler (2007)	The effectiveness of a multi-disciplinary Med Rec process in acute care family medicine unit.	Intervention. Nurses, doctors and pharmacists trained to complete Med Rec on admission and discharge. Pharmacist assessed for discrepancies.	Reduction in medication discrepancies through multi-disciplinary approach.
Pippins, Gandhi, Hamann, Ndumele, Labonville, Diedrichsen, Carty, Karson, Bhan, Coley, Liang, Turchin, McCarthy & Schnipper (2008)	Predicting unintentional medication discrepancies.	Prospective observational study to determine predictors of potentially harmful medication discrepancies for medical patients in acute care.	Unintentional medication discrepancies were related to errors on preadmission medication history and errors reconciling medications at discharge.

Strunk, Matson & Steinke (2008)	Pharmacist impact on Med Rec on patient admission.	Retrospective, observational, single-center study to evaluate pharmacist initiated Med Rec.	Pharmacists' involvement in Med Rec significantly reduces the number of unreconciled medications, may improve patient safety and reduce costs of medication errors and adverse drug events.
Climente-Marti, Garcia-Manon, Artero-Mora & Jimenez-Torres (2010)	Risk of medication discrepancies and reconciliation errors at admission and discharge.	Observational prospective study of patients admitted to medical unit who were receiving medications prior to admission. Pre-admission medications compared to medications ordered on admission and then compared to medications on discharge.	Medication discrepancies at admission predispose patients to medication errors with discharge meds. Should focus on Med Rec on discharge while ensuring medications reconcile with pre-admission medications on admission.
Cornu, Steurbaut, Leysen, De Baere, Ligneel Mets & Dupont (2012)	Effect of Med Rec for geriatric patients at admission, during hospitalization and at discharge.	Retrospective single-center cohort study of patients admitted to acute geriatrics. Independent pharmacist conducted Med Rec for admission, during hospital stay and at discharge using chart review.	Medication discrepancies from physician med history at admission and discharge linked. Medication discrepancies at admission not always linked to discrepancies during hospital stay due to pharmacist intervention. Clinical pharmacist Med Rec can reduce medication discrepancies.

Fitzgibbon, Lorenz & Lach (2013)	Using Med Rec to reduce risk for medication errors on transition from hospital to assisted living.	Retrospective chart review to examine for type and frequency of medication discrepancies.	Large number of medication discrepancies and role for nurses in assisted living facilities to be involved in post-acute care communication and Med Rec to improve safe transitions.
Reports on Qualitative Research			
Magilvy & Congdon (2000).	Care transitions for older adults who live in rural settings.	Longitudinal rural ethnography examined health care transition experiences of older adults, families and care providers.	Identified issues with lack of notification of transition, inconsistent discharge planning, lack of knowledge of local resources at the rural sites.
Van Sluisveld, Zegers, Natsch & Wollersheim (2012)	Med Rec at hospital admission and discharge – barriers to medication safety.	Face to face semi-structured interviews with health care professionals and managers to classify drivers and barriers.	Wide range of driver and barriers that health care professionals think influence the implementation of Med Rec – lack of support for implementation, physicians reluctant to allocate tasks to nurses or pharmacy techs, lack of communication, lack of collaboration between hospital and community care providers.

Vogelsmeier, Pepper, Odera & Weir (2013)	Analysis of health care providers' perceptions of Med Rec	Qualitative. Three focus groups - one with physicians, one with nurses, and one with pharmacists.	Two primary thematic questions – what does Med Rec really mean and who is actually responsible for the process. Each profession had differing views about the purpose and process of Med Rec. Pharmacist role identified as critical to medication safety.
Systematic and Literature Reviews			
Kaboli, Hoth, McClimon & Schnipper (2006)	Role of clinical pharmacists in acute care.	Systematic review.	Improved patient outcomes when pharmacists involved with interventions including Med Rec
Chhabra, Rattinger, Dutcher, Hare, Parsons & Zuckerman (2012)	Med Rec done on transitions to and from long term care.	Systematic review of seven studies.	Clinical pharmacist specialized in providing Med Rec interventions and coordination improved medication safety on transitions to and from long term care.
Laugaland, Aase & Stavanger (2012)	Interventions to improve patient safety on care transitions	Systematic review of 37 publications.	Interventions that promote patient safety at transitions – education and training of health professionals, Med Rec, discharge planning protocols.
Mueller, Cunningham Sponsler, Kripalani & Schnipper (2012)	Hospital based Med Rec practices.	Systematic review of 26 controlled studies.	Limited rigorous studies that compare inpatient Med Rec practices to clinical outcomes. Successful interventions included intensive pharmacy involvement and targeting high risk patients.

Kwan, Lo, Sampson & Shojania (2013)	Med Rec during transitions of care as a patient safety strategy.	Systematic review of 18 studies.	Pharmacists performed Med Rec. Med Rec on its own does not reduce re-hospitalization but may contribute if combined with other interventions aimed at improving care transitions.
Dusek, Pearce, Harripaul & Lloyd (2014)	Care transitions best practices.	Systematic review.	Findings contributed to the Nurses' Association of Ontario Care Transitions guidelines, which assist nurses to understand their roles and responsibilities to promote safe care transitions and continuity of care.
Other Reviews			
Coleman (2003)	Challenges and opportunities with improving transitional care for patients with complex care needs.	Expert analysis of the issues including a definition of transitional care. Outlined a program of research on care transitions.	Outlined components of effective care transitions, which include plan of care communication, completion of Med Rec, preparing the patient and family for transition, and follow-up care plan.
Parry, Coleman, Smith, Frank & Kramer (2003)	Patient centred Care Transitions Intervention in geriatric care.	Introduced an interdisciplinary approach to the improvement of care transitions.	Addressed the negative outcomes of fragmentation of care which can include duplicated services, medication errors, inappropriate or conflicting plans of care, patient/caregiver distress.

Barnsteiner (2005)	Use of Med Rec to transfer information across care settings.	Review of literature to describe the scope of the medication error problem with transitions.	Med Rec a strategy to reduce medication errors at transitions. Limited research about nurses' role with Med Rec. Nurses should play a bigger role in safe med transitions.
Sullivan, Gleason, Rooney, Groszek & Barnard (2005)	Role of acute care nurses with Med Rec.	Challenges and opportunities for nurses and description of interventions at a single care center to improve med Rec and medication safety.	Med Rec is an intervention that can reduce medication errors in acute care. Med Rec involves the disciplines of physician, pharmacist, and nurse. Nurses play a key role with completing an accurate medication history on admission, reconciling medications with orders during the hospital stay and at discharge. Nurses are integral to the achievement of safe outcomes through use of Med Rec.
Clancy (2006)	Improving the safety of care transitions from the perspective of the emergency department.	Commentary. Presents patient cases that illustrate opportunities for improvement of transitions to enhance patient safety.	Communication strategies between health care providers important for continuity of care plan and safety.
Paparella (2006)	Med Rec is an intervention that contributes to safe patient care	Expert opinion article. Focus on the importance of Med Rec in the emergency department.	Med Rec reduces errors. Med Rec needs to start at admission and continue through transitions.

Poole, Chainakul, Pearson & Graham (2006)	Medication errors most common error. Med Rec can reduce errors.	Report of the development of a physician tool to help them complete Med Rec.	Use of the tool reduced discrepancies in medication dose and frequency and reduced errors.
Hickman, Newton, Halcomb, Change & Davidson (2007).	Best practice interventions to improve care of older adults in acute care	Literature review.	Care of older adults is improved with communication of plan of care between care providers and interventions that will reduce adverse events such as medication errors.
Arora & Farnan (2008).	Care transitions for hospitalized patients.	Review of reported strategies that promote safe transitions.	Strategies that improve safe transitions – involve patients in decision making about their care, communication of plan of care between health care providers, Med Rec throughout hospital stay including at discharge.
Boling (2009)	Care transition issues from hospital to home care and primary care physician.	Literature summary of the patient safety challenges with care transitions and interventions that can be used to improve safety and outcomes for patients.	Inadequate communication of the ongoing plan of care from acute care providers to post-acute care providers, Med Rec not done accurately.
Gizzi, Slain, Hare, Sager, Briggs & Palmer (2010)	Estimate prevalence of medication discrepancies to improve effectiveness of Med Rec at admission and at transitions.	Pharmacist conducted retrospective review of randomly selected targeted patients' medication histories done on admission using home medication list to assess for discrepancies and interviewed patient about discrepancies.	Matching home medications with indications for the medications on admission improved the effectiveness of Med Rec. Pharmacist interview of patient about medication discrepancies improved accuracy of medication history.

Knez, Suskovic, Rezonja, Laaksonen & Mrhar (2011)	Evaluate the need for Med Rec for adult patients.	Pharmacist collected comprehensive information on pre-admission medications which was compared to inpatient and discharge medications to identify medication errors.	Large number of pre-admission medications, poorly done medication history on admission and medication errors during hospitalization predisposed patients to medication errors on discharge. Med Rec should be done throughout hospital stay.
Naylor (2012).	The contribution of the Transitional Care Model (TCM) to patient safety and quality outcomes.	Description of the development and testing of the TCM, which is a nurse led team based care delivery strategy that is designed to align care with high risk patients' goals.	TCM provides a strategy that coordinates and communicates the plan of care to enhance safety at transitions and continuity of care. Medication safety is one aspect and includes Med Rec.
Steeb & Webster (2012)	Optimizing the use of Med Rec to improve care transitions.	Expert opinion article.	Med Rec can improve medication safety. Individual health care providers have different roles in the Med Rec process and need to collaborate to use standardized approach that is supported by research. More research needed to identify how to use Med Rec to improve safety and outcomes for patients during care transitions.

Pincus (2013)	Using Med Rec to improve care of older adults at transition of care.	Expert opinion article on the role of a transitional care intervention and role of geriatric nurses.	Vulnerable patients require thorough Med Rec to identify potential medication errors, high risk medications and adverse events. Geriatric nurses to assume a role in completing Med Rec.
Knisely, Bartlett Ellis & Carpenter (2015)	Medication management across care transitions.	Case report detailing complexities of medication management and role of clinical nurse specialist (CNS) practice.	Need for quality patient-provider communication, assessing and managing complex medication regime, Med Rec and assessment of risk factors for medication discrepancies and errors across care transitions. Role for CNS to lead improvement.
Professional Literature			
Canadian Nurses Association. (2012).	National Expert Commission: A nursing call to action.	Report of a national consultation on transformation of the health system from a person-centered perspective	Nurses have a major role to play in the delivery of safe, quality care. Nurses participate in innovative care delivery initiatives that are beneficial.
Saskatchewan Registered Nurses Association (2015)	Medication management for RNs: A patient-centered decision-making framework.	The role of RNs in Saskatchewan in medication management including Med Rec.	RNs have the knowledge to complete the steps of Med Rec at points of transition.

Other Reports (Grey Literature)			
Institute for Safe Medication Practice (2010)	Optimizing communication about medications on transitions of care.	Ontario roundtable discussion to develop recommendations for medication safety on transitions.	Recommendation that Med Rec be completed in partnership with the patient at any transition point in the continuum of care to enhance safety.
Saskatoon Health Region Annual Report (2011-2012)	Reports health region activities and outcomes.	Report of health region outcomes for mandatory Ministry of Health care directives.	Med Rec implemented on admission to acute care.
Accreditation Canada, Canadian Institute for Health Information, Canadian Patient Safety Institute, Institute for safe Medication Practice Canada (2012)	Progress in the implementation of the Med Rec process	Presents information about implementation of Med Rec across Canada	All jurisdictions in Canada report Med Rec as one of their top three patient safety priorities
Institute for Safe Medication Practice. Safer Healthcare Now! (2012)	Implementing Med Rec in long term care.	Med Rec in long term care.	Getting started kit.
Institute for Healthcare Improvement (2013)	Testing for improvement.	Science of improvement and how to test for clinical improvement.	Activities that can be used for improvement.

Appendix B

Participant Consent Form

You are invited to participate in a research project entitled *A case study of a medication reconciliation process: The health care provider's perspective*. Please read this form carefully, and feel free to ask any questions you might have.

Project Title: A case study of a medication reconciliation process: The health care provider's perspective.

Researcher: Catherine Jeffery, PhD student, College of Nursing, University of Saskatchewan, 306-966-6261, cathy.jeffery@usask.ca.

Supervisor: Dr. Karen Semchuk, College of Nursing, 306-786-0581, km.semchuk@usask.ca.

Purpose(s) and Objective(s) of the Research:

- The purpose of the proposed study is to understand the experiences and contributions of the health care providers who work with the medication reconciliation process to provide safe care for patients who are transferred from an acute care facility to a long term care facility in an urban setting. The study will be conducted using a qualitative method and will consist of audiotaped interviews of participants. Registered Nurses, Registered Psychiatric Nurses, Licensed Practical Nurses, Pharmacists, Physicians, and physician office staff who have participated in the medication reconciliation process for patients transferred between urban acute care and urban long term care facilities in the Saskatoon Health Region will be invited to participate in this study.

Procedures:

- One interview will take approximately thirty to sixty minutes of each participant's time. The interview will be conducted at a convenient time and location for the participants. The study results will reflect pooled data and will be presented to participants as a summary of themes arising from the interview data. It is expected it will take approximately 12 weeks to complete the interviews and another 12 weeks to analyze the data and write a report of the results.
- Please feel free to ask any questions regarding the procedures and goals of the study or your role.

Potential Risks:

- There are no known or anticipated risks to you by participating in this research.

Potential Benefits:

- It is possible that your patients will benefit from the research through the improved understanding of how health care providers contribute to patient safety through medication

reconciliation. Although this research is being conducted on your unit or in your office, it may be possible that results could benefit other clinical units by way of illustrating opportunities for improvement.

Confidentiality:

- The data will be handled by the researcher and audiotape transcriber only. The audiotape transcriber is required to sign a confidentiality agreement. All identifying information will be removed from the data and code names will be assigned to each participant. Only pooled data will be reported. Because of the nature of this qualitative study, it is possible that participants will be aware of other participants, but any and all identifying data will be removed from the results.
- **Storage of Data:**
 - The data will be kept for a period of five years in a locked cabinet in the research Supervisor's office.
 - All data will be destroyed after the five year period following the completion of the research.

Right to Withdraw:

- Your participation is voluntary, and you can answer only those questions you wish to answer. There is no guarantee that you will personally benefit from your involvement in the study. The information you provide will be held in strict confidence and discussed only with the researcher and her supervisor, who will not know your identity.
- You may withdraw from the research project for any reason, at any time, without penalty of any sort and there will be no effect to your employment or status on your clinical unit or place of work.
- Your right to withdraw data from the study will apply until data have been pooled. After the data have been pooled, it is possible that some form of research dissemination will have already occurred and it may not be possible to withdraw your data.

Follow up:

- To obtain results of the study, please contact the researcher using the information at the top of page 1 of this document. All study participants will be provided with a summary of the results of the study.

Questions or Concerns:

- If you have questions or concerns about the study, please contact the researcher(s) using the contact information at the top of page 1;
- This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office (306) 966-2975. Out of town participants may call toll free (888) 966-2975.

Consent:

My signature below indicates that I have read and understand the description provided. I have had an opportunity to ask questions and my questions have been answered. I consent to participate in the research project. A copy of this Consent Form has been given to me for my records.

Name of Participant Signature

Researcher's Signature Date

A copy of this consent will be left with you, and a copy will be taken by the researcher.

Appendix C

Participant Transcript Review and Consent for Release Letter

Dear [name of health care provider],

I am sending you a copy of the transcript of our audio taped interview. Please review this copy and mark any changes or additions on the copy and return it to me in the stamped envelope provided by (date two weeks out from the date of this letter) and I will make those changes to the information you provided me. If you do not want to make any changes to the transcript, there is no need for you to return it to me and you can keep it.

I am also sending you two copies of the data/transcript release form that, when signed by you, gives me permission to use the contents of the audio taped transcript in the write up of my PhD dissertation. You can see that I have signed both forms. If you are in agreement, please sign one of the data/transcript release forms and return it to me in the stamped envelope provided. The other form is for you to keep.

Thank you again for participating in my study [name of health care provider].

Kind regards,

Cathy Jeffery

Enclosures

Title: A case study of a medication reconciliation process: The health care provider's perspective

I, _____, have reviewed the complete transcript of my personal interview in this study, and have been provided with the opportunity to add, alter, and delete information from the transcript as appropriate. I acknowledge that the transcript accurately reflects what I said in my personal interview with Cathy Jeffery. I hereby authorize the release of this transcript to Cathy Jeffery to be used in the manner described in the Consent Form. I have received a copy of this Data/Transcript Release Form for my own records.

Name of Participant

Date

Signature of Participant

Signature of researcher

Appendix D

Depiction of medication reconciliation process principles of change for transfer of patients between urban acute and long term care (LTC) facilities (see page 139 for an abbreviation key)

Planned Work

Inputs (resources that go into the process)	Activities (the process undertakes)	Outputs (produced through the activities)
<u>Health care professionals:</u> CPAS CCC LTC Director/Assistant Director of Care (DOC) Patient Family Acute care/LTC RN, RPN, LPN Acute care/community pharmacist Acute care/LTC physician LTC NP Acute care/LTC physician office staff	<u>Background:</u> Patient placed on waiting list for LTC placement. CPAS CCC notifies acute care via email or phone call. Decision to admit patient to LTC facility. LTC facility DOC notifies patient, family, CPAS CCC as applicable, acute care unit/facility. LTC DOC calls acute care unit/facility to learn patient specifics.	

<p><u>Documents specific to the process:</u></p> <p>Discharge/transfer medication form(s) (mediation reconciliation).</p> <p>Allergy/intolerance record.</p> <p>Pharmacy/nurse recommendation form.</p> <p>Medication administration record (MAR).</p> <p>Fax cover sheet.</p> <p><u>Communication:</u></p> <p>Fax</p> <p>Phone</p> <p>Email</p> <p>EMAR (for certain LTC facilities)</p>	<p><u>Acute care nursing or hospital pharmacist:</u></p> <p>Review of 24 hour medication administration record (MAR).</p> <p>Review allergy/intolerance form.</p> <p>Review admission med rec form and/or med list prior to admission.</p> <p>Complete discharge/transfer med form excluding Dr. signature.</p> <p>Identify which meds were discontinued, continued during admission, changed during admission, new meds, meds of concern, continued meds requiring further monitoring.</p> <p>Identify PRNs use in last 72 hours or other PRNs used regularly such as bowel meds.</p> <p>Complete pharmacy/nursing recommendations if appropriate.</p> <p>Fax discharge/transfer med forms, allergy/intolerance record, fax cover letter and pharmacy/nursing recommendation form (if done) to most responsible physician (MRP) in acute care.</p> <p>Place original discharge/transfer form and</p>	<p>Medication reviewed.</p> <p>MAR reviewed.</p> <p>Allergy/intolerance record reviewed.</p> <p>Admission med rec and/or med list prior to admission reviewed.</p> <p>PRN meds reviewed and regularly used ones identified.</p> <p>Completed documents specific to the med rec process faxed to acute care MRP and copy kept on acute care chart.</p>
---	---	---

	<p>pharmacy/nursing recommendation form (if done) on acute care chart.</p> <p>Fax LTC cover letter to LTC home to alert med rec being reviewed by MRP in acute care.</p> <p><u>Acute care physician (MRP):</u></p> <p>Read fax cover letter.</p> <p>Review discharge/transfer medication form and any attached recommendations.</p> <p>If disagree put line through the medication or add medications such as PRNs.</p> <p>If agree indicate 1 month for quantity and no refills (last columns), sign and date bottom of form.</p> <p>Ensure completed paperwork (signed discharge/transfer med forms, allergy/intolerance record and pharmacy/nursing recommendation form (if done) is faxed to community pharmacy as indicated on the fax cover letter.</p> <p>Paperwork must be reviewed, completed and faxed to the community pharmacy by</p>	<p>LTC notified by fax that med rec being reviewed by acute care MRP.</p> <p>Med rec forms and any recommendations received by acute care MRP.</p> <p>Med orders completed and meds ordered for 1 month.</p>
--	---	--

	<p>to LTC home with MAR.</p> <p>Delivery of meds ideally should take place one day prior to the arrival of the patient (if feasible).</p> <p>If any question arises regarding the orders on the discharge/transfer med forms the physician who has completed the discharge/transfer med forms is to be contacted directly to clarify.</p> <p><u>Long term care nurses:</u></p> <p>Receives LTC fax cover letter from acute care nurse or hospital pharmacist to alert home discharge/transfer med forms are currently being reviewed by acute care MRP.</p> <p>If orders not received in a timely manner follow-up with the acute care MRP.</p> <p>Accept signed discharge/transfer med forms as valid order for 1 month once copy received from community pharmacy.</p> <p>Place discharge/transfer med forms into order section of the chart.</p>	<p>1 month of prescriptions and MAR delivered to LTC home.</p> <p>Notification that meds being reviewed by acute care MRP.</p> <p>Signed discharge/transfer med forms</p>
--	---	---

	<p>Present discharge/transfer med form and other supporting documents to the patient's LTC physician/Nurse Practitioner within 30 days.</p> <p>Ensure patient has new orders by LTC physician within 30 days of admission.</p> <p><u>LTC physicians:</u></p> <p>Review the completed discharge/transfer med forms and other supporting documents within 30 days of LTC admission.</p> <p>Complete new medication orders indicating – stop, change, continue, add new medications.</p> <p>Notify nursing that new medication orders have been written so they can be faxed to the community pharmacy.</p>	<p>accepted as medication orders for one month and copy placed in patient's chart.</p> <p>New medication orders written within 30 days of patient's admission.</p>
--	--	---

Intended Results (Outcomes)

Intermediate	Ultimate
<p><u>Acute care:</u></p> <p>24 hour MAR reviewed</p> <p>72 hour past use of PRN medications identified</p> <p><u>Acute care MRP:</u></p> <p>Discharge/transfer med forms, allergy/intolerance record, pharmacy/nursing recommendation form (if done) reviewed, completed and faxed to community pharmacist by 4 p.m. the day documents are received.</p> <p><u>Acute care MPR office clerical staff:</u></p> <p>Provides documents to acute care MRP or on-call physician to be reviewed and completed by 4 p.m. the day documents received.</p> <p><u>Community pharmacy:</u></p> <p>Fill prescriptions for 1 month and deliver to LTC facility one day prior to patient's arrival.</p>	<p>Medication list, medication administration record (MAR), and medications in place in the LTC facility before patient arrives</p>

<p><u>LTC nurse:</u></p> <p>Present the discharge/transfer med forms and other supporting documents to patient's LTC physician/NP within 30 days.</p> <p>Ensure patient has new orders by LTC physician/NP within 30 days of admission.</p>	
---	--

Key for abbreviations: CPAS – Client/Patient Access Services; CCC - Client Care Coordinator; RN – registered nurse; RPN – registered psychiatric nurse; LPN – licensed practical nurse; NP - Nurse Practitioner; MAR - medication administration record; LTC - Long Term Care; EMAR - electronic medication administration record; MRP - most responsible physician; PRN – non-regularly scheduled medications.

Appendix E

Health Care Provider Letter of Invitation

Dear Health Care Provider,

Although there is a good amount of current literature about the benefits of the medication reconciliation process, less is known about what health care providers who are part of the process think about it and what their experiences are.

Have you completed at least one step of the medication reconciliation process for patients transferred from urban acute care to urban long term care in the Saskatoon Health Region? If you have, we are very interested in hearing about your experiences and perceptions of the process.

This letter is being provided to you to as an invitation for you to participate in a qualitative case study of the medication reconciliation process that is being used when patients from urban acute care units are transferred to long term care facilities within the City of Saskatoon.

All that is required from you is 30 – 60 minutes of your time for a tape recorded interview about your experiences and perceptions of the medication reconciliation process for patients who are being transferred. Your participation is voluntary and your responses are confidential. Your responses will be combined with the responses of other participants and there will be no way to link these combined responses to you.

The results of this study will help add to what is known about the contribution of the medication reconciliation process to safe care and how health care providers think the process helps with continuity of care when patients are transferred between acute care and long term care.

We hope you will be interested in participating in this important research! This study is being conducted by Cathy Jeffery RN a PhD student at the College of Nursing, University of Saskatchewan.

Here is how you can get involved: contact Cathy Jeffery at (XXX)-XXX-XXXX or (XXX)-XXX-XXXX or email address to learn more and to participate in the study.

Cathy Coote BSc (Pharm)
Manager, Pharmacy Services
Saskatoon Health Region

Cathy Jeffery RN
Nursing PhD student
University of Saskatchewan

Appendix F

Health Care Provider Invitation to Participate Poster

Are you a nurse, pharmacist, or physician who has been involved with medication reconciliation for patients who were transferred from an acute care unit to a long term care facility in Saskatoon?

If so, this invitation is for you to participate in a research study of the experiences and perceptions of health care providers who work with the medication reconciliation process for transferring patients.

All that is involved is a 30 – 60 minute tape recorded interview at a date, time and place of your convenience.

Please contact Cathy Jeffery, RN, PhD student at (XXX)-XXX-XXXX or (XXX)-XXX-XXXX or email address to find out more and to participate. Thank-you!

Appendix G

Long Term Care Newsletter Health Care Provider Invitation to Participate

An Invitation for Nurses, Pharmacists and Physicians

Are you a nurse, pharmacist, or physician who has been involved with Med Rec for patients who were transferred from an acute care unit to a long term care facility in Saskatoon?

If so, this invitation is for you to participate in a research study of the experiences and perceptions of health care providers who work with the Med Rec process for transferring patients.

Although there is a good amount of current literature about the benefits of the Med Rec process, less is known about what health care providers who are part of the process think about it and what their experiences are.

All that is required from you is a 30 – 60 minute tape recorded interview, at a time and place of your convenience, about your experiences and perceptions of the Med Rec process for patients who are being transferred. Your participation is voluntary and your responses are confidential.

The results of this study will help add to what is known about the contribution of the Med Rec process to safe care and how health care providers think the process helps with continuity of care when patients are transferred between acute care and long term care.

I hope you will be interested in participating in this important research! This study is being conducted by Cathy Jeffery, RN a PhD student at the College of Nursing, University of Saskatchewan.

Here is how you can get involved: contact Cathy Jeffery at (XXX) XXX-XXXX or (XXX) XXX-XXXX or email address to learn more and to participate in the study.

Thank you in advance for considering this invitation!

Appendix H

Semi-Structured Interview Guide

Research Questions:

1. What are the experiences of health care providers who are involved with the medication reconciliation process for the transition of patients from urban acute care facilities to urban long term care facilities?
2. What are the views of health care providers involved with medication reconciliation regarding how they use the medication reconciliation process to contribute to safe care transitions for patients who are transferred from urban acute care to urban long term care facilities?
3. What do health care providers involved with medication reconciliation see as factors that facilitate or provide barriers to the enactment of the medication reconciliation process?

Establish the topic:

I am interested in learning about your experiences using the medication reconciliation process for patients who are transferred from acute care to long term care facilities in an urban setting. I have a few questions to get our discussion started.

Initial open ended questions:

While we are talking, please think about any patients for whom you have used the medication reconciliation process as they were transferred from an urban acute care to urban long term care facility.

- Please describe your role in the medication reconciliation process.
 - To help describe your role, please refer to the diagram of the process that I have provided and tell me where your work fits in the diagram.
 - What prepared you for this role?
- Tell me about any opportunities you think the medication reconciliation process offered.
 - What worked well?
 - How has med rec become routine or standard work for you or on your unit?
 - What factors do you think need to be in place for med rec to be routine or standard work?
- Tell me about any challenges you experienced with the medication reconciliation process.
 - What could have been improved?
 - What system or other factors hindered your work with the medication reconciliation process?
- How do you think the medication reconciliation process contributes to patient safety?
 - What role did you play in contributing to patient safety?
 - How did you know your patients were safe?

Closure

Is there anything else you would like to tell me about your experiences with the medication reconciliation process for patients transferred from urban acute care to urban long term care facilities?