Exploring the Barriers and Facilitators to the Integration of the Nurse Practitioner as Most Responsible Provider Model of Care in a Hospital Setting

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ABSTRACT

Background: Since 2012, nurse practitioners (NPs) in Ontario have the professional capacity to assume the role of the most responsible provider (MRP) in hospitals; however, few have implemented this model.

Aim: To explore the barriers and facilitators to the integration of the NP as MRP model of care in a hospital setting.

Methods: A qualitative descriptive design with secondary data collected from a larger study, was used with principles from integrated knowledge translation.

Findings: Thirteen barriers and eleven facilitators were found, such as: (i) challenges with off hour coverage; (ii) funding and remuneration; (iii) discrepancies in the employment standards regulations; and (iv) lack of a critical mass. Facilitators included the plan for role implementation, establishment of trust and leadership from the team.

Conclusion: Many barriers, predominantly at the healthcare system-level, make it difficult to integrate the NP as MRP model of care in hospitals.

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LIST OF ABBREVIATIONS

ACNP	Acute Care Nurse Practitioner
APN	Advanced Practice Nurse
CAHS	Canadian Association of Health Sciences
CIHI	Canadian Institute for Health Information
CIHR	Canadian Institute of Health Research
CNA	Canadian Nurses Association
CNO	College of Nurses of Ontario
HCP	Healthcare Provider
iKT	Integrated Knowledge Translation
KU	Knowledge User
MOHLTC	Ministry of Ontario Health and Long-Term Care
MRP	Most Responsible Provider
NP	Nurse Practitioner
NNP	Neonatal Nurse Practitioner
NPAO	Nurse Practitioner's Association of Ontario
OHA	Ontario Hospital Association
OHIP	Ontario Health Insurance Plan
OT	Occupational Therapist
PT	Physiotherapist
RN	Registered Nurse
RPN	Registered Practical Nurse
RNAO	Registered Nurses' Association of Ontario
SW	Social Worker

CHAPTER 1:

INTRODUCTION

Many factors are causing changes to the Canadian healthcare system. Increasing healthcare expenditures and the need for cost containment have required the government to adjust its budget, so as to reduce publicly funded health coverage and health expenditures (Stabile et al., 2013). In addition, healthcare needs are becoming more complex with the increasing life-expectancy and aging population (Canadian Nurses Association [CNA], 2019). Healthcare settings are also expanding and becoming more diverse, driving up healthcare costs (CNA, 2019). Moreover, professional human resources are scarce, which is threatening the sustainability of the Canadian healthcare system (van Soeren et al., 2009). All of these factors are pushing governments to look for alternative, less expensive measures to provide quality and effective care (Bauer, 2010). The role of nurse practitioners (NPs) is innovative, flexible and cost-effective, and helps to meet the increasing needs of the rapidly changing healthcare system (Bauer, 2010; CNA, 2019). In Canada, NPs are registered nurses who have obtained a master's degree with the certification, knowledge, and skills required for an advanced scope of practice (Acorn, 2015). This includes advanced assessments and diagnoses of patients, prescribing medication, ordering diagnostic tests, and analyzing their results (Acorn, 2015). In Ontario, NPs can assume the role of the most responsible provider (MRP) in hospitals since they now have admitting and discharging privileges (Acorn, 2015). Nevertheless, this role is rarely enacted for reasons that remain unclear (Hurlock-Chorostecki & Acorn, 2018). This thesis aims to explore the barriers and facilitators to the integration of the NP as MRP model of care within a hospital setting.

1.1 Statement of the Problem

In 2011, the scope of practice of NPs in Ontario changed following the amendment of the Regulation 965 of the Public Hospital Act (Ontario Hospital Association [OHA], 2012). Their scope of practice increased to include admitting, treating, and discharging patients in acute care hospitals, and to independently treat patients (OHA, 2012). This new role is known as the most responsible provider (MRP), in which NPs can independently assume all medical care within their defined scope of practice, to patients from the time they are admitted until they are discharged, without supervision from a physician (OHA, 2012). Four hospitals in Ontario have implemented this model of care: Lakeridge Health in Whitby, St-Joseph's Health Centre in Toronto, Montfort Hospital in Ottawa (Montfort Hospital, 2017), and Markham Stoufville Hospital (personal communication with KU#3, December 18, 2019). Although this model of care has been evaluated positively (Acorn, 2015), at this time, two of the hospitals have discontinued the model. In the literature, a number of factors have been reported to contribute to the lack of NP utilization, such as barriers to NPs' practice. In any case, none of the barriers refer to the role of NPs as the MRP, and information is lacking on the efficiency, impact, and barriers and facilitators to NPs in the role as the MRP. To enable more NPs to practice as the MRP and exercise their full scope of practice, these barriers and facilitators need to be further explored. Therefore, the purpose of this study is to explore the barriers and facilitators to the integration of NPs as the MRP of care within a hospital setting.

The specific objective of the study is to identify the barriers and facilitators to integrating NPs in the MRP model within an Ontario hospital setting.

To achieve this objective, the following research question is addressed: What are the barriers and facilitators to integrating NPs in the MRP model of care as perceived by the healthcare team members involved in the model? The results of this study will provide a greater

understanding of the challenges surrounding the integration and sustainability of this role in Ontario hospitals. A greater understanding of the barriers and facilitators to the implementation of this role will also allow hospital administrators, decision makers, and researchers to develop measures that may mitigate the existing barriers and promote the implementation of the NP as MRP model of care. In other words, a better understanding of the barriers to integration will help nurses and decision makers comprehend why NPs are not exercising their full scope, and what needs to be done for them to practice as the MRP. Hopefully, this study will lead to a better utilization of NP services and health human resources, and the advancement of the nursing discipline.

1.2 Thesis Outline

I begin by presenting the background of NPs including their history and their current practice in Canada and Ontario. This chapter will include further explanations for NPs in the MRP role. Chapter 2 will describe the conceptual framework that guides this project. In Chapter 3, the literature review is discussed, addressing several concepts including patient experience; social, political and financial barriers to NPs' practice; facilitators of NPs' practice; and the clinical and cost effectiveness of NPs. In Chapter 4, I describe the methodology, including the paradigm, design, setting, sample, recruitment, data collection, data analysis, maintenance of rigor, and ethical considerations. Chapter 5 presents the results, which are organized in the same way as the concepts in the conceptual framework. The discussion is given in Chapter 6, where I provide a summary of the results and new findings, and highlight the key points, which include: caring for ALC patients, trust, tensions within the results, coverage, and healthcare system challenges. Limitations of the framework and the implications for practice, policy, and research are also outlined.

1.3 Background

This section addresses the historical evolution of the NP role. Moreover, the contemporary context of NPs' current practice in Canada and Ontario are explained.

1.3.1 History of NPs in Canada

In Canada, NPs were introduced in two phases: in primary care, and afterwards in acute care. The first phase began in the late-1960s when universal publicly funded healthcare insurance was implemented, increasing the demands for primary healthcare with the perceived shortage of physicians especially in remote and isolated areas of northern Canada (Angus & Bourgeault, 1999; de Wiit & Ploeg, 2005). These events created a need for more primary healthcare practitioners (de Wiit & Ploeg, 2005). Multiple research studies were conducted on the effectiveness of NPs working in primary care, where NPs were found to be a cost-effective alternative to physicians that could provide safe, high quality and effective primary healthcare (Angus & Bourgeault, 1999; Kaasalainen et al., 2010; Lomas & Stoddart, 1985; Spitzer et al., 1974). Nevertheless, government funding and programs for NPs were discontinued in the early-1980s due to economic tensions with physicians and insufficient funding from the government that greatly limited the ability of NPs to practice (Angus & Bourgeault, 1999). NPs were reintroduced in the early-1990s following the need for cost containment and the increased emphasis on health promotion and disease prevention (Angus & Bourgeault, 1999). The role was valued by the Health Minister, at the time, who advocated for legislation on NPs' professional status, which was officially recognized in 1998 (Angus & Bourgeault, 1999).

The entrance of NPs into acute care settings in Canada began in the late-1980s in neonatal intensive care units to address the shortage of pediatric residents, the increased survival rates of infants, and the desire to develop and advance the nursing profession (Mitchell et al., 1991). In

addition, the role of NPs addressed the lack of continuity of care for patients with complex care needs (Pringle, 2007). The first program for acute care NPs was the neonatal NP program, which was offered by McMaster University starting in 1986 (Mitchell et al., 1991). According to Mitchell et al. (1991), the role of these acute care NPs working in the neonatal intensive care unit consisted of managing neonate care and assuming a number of delegated medical acts, such as making diagnoses, ordering medications and investigations, and performing medical procedures like intubations, lumbar punctures, and insertion of umbilical catheters, peripheral arterial lines and chest drains. The NPs were assigned to patients and practiced under the supervision of the attending neonatologist (Mitchell et al., 1991). A comprehensive research program on the role of neonatal NPs, which included a series of studies on the neonatal NP educational program, the implementation of the role, and the outcomes of the role was underway in the late-1980s and early-1990s (Kaasalainen et al., 2010). DiCenso (1998) conducted a literature review (N=12) on aspects of the implementation of this role, such as the evaluation of the role of neonatal NPs (NNPs), their cost, role acceptance, and job satisfaction. NPs were found to be clinically effective with comparable clinical outcomes to physicians in terms of mortality rate, length of stay, number of neonatal complications, quality of care, parent satisfaction, long-term outcomes, and costs (DiCenso, 1998; Mitchell-DiCenso et al., 1996). NNPs were also found to be cost-effective (DiCenso, 1998). Furthermore, their role was accepted and well appreciated by most of the interdisciplinary team members with the exception of some members (i.e., the respiratory therapists) (DiCenso, 1998). Respiratory therapists viewed NNPs as encroaching on their area of expertise (Dicenso, 1998). They also preferred physicians to be in charge of the patients and that the NNPs should mainly conduct procedural aspects of care (Dicenso, 1998). NNPs reported being satisfied with their role, with the most satisfying aspects being their autonomy; relationships with physicians, staff nurses, patients' family members, and other NNPs; and their

patient care management and outcomes (Beal et al., 1997; DiCenso, 1998). A number of other researchers conducted studies on NNPs with findings that supported DiCenso (1998) (Bissinger et al., 1997; Britton, 1997; Dillon & George, 1997; Mitchell et al., 1995, 1991; Smith & Kirchhoff, 1997).

1.3.2 The Current Role of NPs within the Canadian Context

In Canada, 6159 NPs were present in 2019 (Canadian Institute for Health Information, 2020). The NP title falls under the umbrella term of advanced practice nurse (APN), who are registered nurses who have obtained a master's degree, and who have gained the knowledge and skills required to practice at an advanced scope (CNA, 2019). Their practice aims to meet the increasingly complex healthcare needs of individuals, families, groups, or communities by providing patient-centered care, improving health system organization and outcomes through leadership initiatives, applying research findings to clinical practice, creating programs to improve healthcare delivery, and much more (CNA, 2019).

According to the Advanced Practice Nursing Pan Canadian Framework developed by the CNA (2019): "NPs improve access to healthcare, reduce wait times and alleviate pressures on the healthcare system" (p. 19). NPs' scope of practice includes diagnosing and managing acute and chronic conditions, performing preventive and curative interventions, and ensuring continuity of care (CNA, 2019). Nevertheless, the level of autonomy at which they may practice and their scope of practice differs as each Canadian province has its own legislation concerning the scope of practice of NPs (Kilpatrick et al., 2010). For example, all provinces except Quebec, allow NPs to communicate a diagnosis (Kilpatrick et al., 2010; CNA, 2019). In addition, some provinces, like Quebec and Yukon, have limits on which medications NPs can prescribe, such as controlled drugs and substances (CNA, 2019). Several other practice distinctions occur across the provinces

(CNA, 2019), which are further addressed in the following paragraph. These differences in legislation create inconsistencies in NP practice throughout Canada, which can hinder the advancement of the integration of NPs within healthcare settings (Archibald & Fraser, 2013; Kilpatrick et al., 2010).

The advancement of NPs' scope of practice has come a long way in Canada (CNA, 2019). In the early-2000s, NPs mostly relied on medical directives to practice, which created major barriers to their practice (Kilpatrick et al., 2010). In the past 20 years, however, NPs' scope of practice has expanded, allowing them to practice independently with less reliance on medical directives, exercise their full competencies, and more effectively respond to the changing and various healthcare needs of the Canadian population (CNA, 2019). According to the CNA (2019), restrictions that previously limited their practice have changed to allow all NPs in Canada to perform comprehensive assessments, make and communicate a medical diagnosis (except in Quebec), order laboratory tests, order and interpret diagnostic imaging (except for CT scans and MRIs), prescribe controlled drugs and substances (with restrictions in Yukon and Quebec), independently refer a patient to a specialist (restricted to primary care in Quebec), prescribe massage therapy, acupuncture, and physiotherapy (except in Quebec), prescribe orthotics, mobility aids, and stockings, order home oxygen and insulin syringes and blood glucose monitors (except in Quebec), and order incontinence and ostomy supplies.

In 2017, the federal legislation around NPs' scope of practice was expanded, allowing them to participate in providing medical assistance in dying, certify people for the medical expense tax credit, sign medical certificates for all three Employment Insurance caregiving benefits, and much more (CNA, 2019). This provided Canadians with more accessible healthcare services and improved responses to their healthcare needs, and to meet the challenges of the continuously evolving healthcare system (CNA, 2019).

Although NPs' scope of practice is defined by provincial legislative/regulatory acts, the employer may place restrictions on the legislative permitted acts of NPs (CNA, 2019). The scope of practice outlined by the employer refers to the employment scope of practice (CNA, 2019). The employer cannot increase the NPs' legal scope of practice (CNA, 2019), which contributes to inconsistencies of practice throughout Canada. For example, in Ontario long-term care settings, the MOHLTC implemented 75 Attending NP positions in LTC; however, NPs are not being utilized to their full scope (Registered Nurses' Association of Ontario [RNAO], 2019). Their time is more often used for administrative tasks rather than patient care (RNAO, 2019).

NPs' scope of practice within the interdisciplinary team is determined in collaboration with the physicians and the hospital medical advisory board (Kilpatrick et al., 2012b). According to the NPs' legislative scope of practice, they are able to exercise their role autonomously (CNA, 2019). Nevertheless, their level of autonomy and ability to exercise their full scope of practice may differ according to the employer and physicians with whom they work (CNA, 2019). Their agreements of practice are outlined in bylaws and policies made within their institution. As physicians still maintain a certain level of control over NPs' practice within a given hospital practice setting, in terms of prescription authority and patient treatment, their autonomy in the hospital is often limited (Van Soeren et al., 2011). Their ability or inability to exercise their full scope of practice influences the success and effectiveness of the integration of NPs within an interdisciplinary team, which directly affects healthcare delivery and patient care (Hurlock-Chorostecki et al., 2014).

Currently, NPs practice mostly on a consultative and shared-care basis (Acorn, 2015; Hurlock-Chorostecki et al., 2008), which means they are part of an interdisciplinary team where the physician is the MRP. Therefore, the physician is primarily responsible and accountable for the patients' care during their stay at the hospital (OHA, 2012). In a shared-care model, NPs work

in a dyad with physicians to provide care to patients during their hospital stay (Acorn, 2015). In a consulting model, NPs are consulted for specialized services and only provide care to patients for a short time (Acorn, 2015).

1.3.3 The Role of NPs in Ontario

Ontario has the largest proportion of NPs in Canada, with 4,081 registered NPs in 2021 (College of Nurses of Ontario [CNO], 2021) representing more than half of all Canadian NPs. Approximately half of the positions available to them are in primary care, and 34.2% of the positions are in acute care hospitals (CNO, 2017). NPs can care for a wide range of populations, from children to seniors in a variety of healthcare settings, including primary care, acute care, palliative care, rehabilitative care, and curative and supportive care (CNO, 2019). Their practice also includes health promotion and disease prevention, and collaborating with other healthcare providers, providing or requesting consultations and referrals, and reviewing the recommendations from the consultations (CNO, 2019).

Many changes in legislation now allow NPs to assume more medical acts, which decreases their reliance on medical directives to practise (CNA, 2019). At times, however, NPs still need to rely on medical directives since their practice is sometimes restricted (CNA, 2019). For example, NPs cannot order CT scans, MRIs, or point-of-care testing (CNO, 2020). Furthermore, they can only order ECGs in non-urgent situations (CNO, 2020). Therefore, NPs may have to rely on medical directives to perform these acts (CNO, 2020), which limits their ability to exercise their full scope of practice, negatively affects timeliness and quality of care, and decreases the satisfaction of NPs about their role (Acorn, 2015; Hurlock-Chorostecki et al., 2008).

Admitting privileges was a topic addressed by The Commission on the Future of Health Care of Canada (also known as the Romanow Report) (Romanow, 2002). The report examined the future and sustainability of Canada's universally accessible publicly funded healthcare system, and recommend policies to ensure long-term sustainability (Romanow, 2002). The report highlights the importance of NPs and suggests that their scope of practice should be expanded to allow them to admit patients to hospitals for initial treatment and refer them to the appropriate specialists (CNA, 2019; Romanow, 2002).

In 2009, Bill 179 was passed by the Ontario Government (RNAO, 2015b). The Bill, also known as the Regulated Health Professions Statue Law Amendment Act, 2009, amended or repealed multiple acts governing regulated healthcare professions (Ministry of Ontario Health and Long-Term Care [MOHLTC], 2018). The purpose of the Bill was to expand the services provided by certain regulated healthcare professionals (including NPs), and strengthen and improve the healthcare system by promoting a team-based and collaborative care approach (MOHLTC, 2018). Multiple amendments in the Bill were concerned with increasing NPs' scope of practice (RNAO, 2015b). The terminology used to describe the clauses was broadened to include other healthcare practitioners (including NPs) rather than only physicians (MOHLTC, 2018).

Many stakeholders such as the RNAO and the Nurse Practitioners Association of Ontario (NPAO) advocated for the amendment of Regulation 965 of the Public Hospital Act (RNAO, 2011; NPAO, 2010). The regulation addresses hospital management, including admitting and discharging privileges, within Ontario hospitals (MOHLTC, 2012). Both the RNAO and the NPAO strongly supported this initiative since it allowed for full utilization of NPs' scope of practice, to increase accessibility, timeliness, and continuity of care, promote effective utilization of healthcare resources, and increase the effectiveness of healthcare delivery (RNAO, 2011;

NPAO, 2010). The NPAO addressed these points in a *Response to Health Workforce Ontario* as they were consulted on this matter (NPAO, 2010). The RNAO sent a letter to the MOHLTC encouraging the initiative and providing recommendations for the amendment (RNAO, 2011).

In 2011 and 2012, the Regulation 965 of the Public Hospital Act was amended to provide NPs with the ability to admit, treat, and discharge patients from Ontario hospitals (OHA, 2012). The amendment was introduced in two stages: the first stage was the implementation of NPs' privilege to discharge patients in hospitals (MOHLTC, 2011). This was achieved on July 1, 2011. The second stage, allowing NPs to admit patients, was implemented a year later (MOHLTC, 2011). This change in legislation allowed NPs be the MRP in hospitals (OHA, 2012), a term that is not yet legally defined, though it refers to: "the provider who has primary responsibility and accountability for the care of a patient within the hospital" (Acorn, 2015, p. 3). The role of NPs as the MRP was developed to maximize healthcare workforce utilization, increase access to care, decrease wait times, and improve patient-centered care (MOHLTC, 2012). This would lead to improved patient safety, quality of care, and patient satisfaction (RNAO, 2015).

When the new role of NPs as the MRP was rolled out, the OHA created a guide for hospitals that described the process and considerations that enabled NPs to practice as MRPs (OHA 2012). Furthermore, the RNAO issued a toolkit, *The NP Utilization Toolkit*, that described how NPs should be utilized in hospitals, their impacts on patient outcomes, cost-effectiveness and interprofessional practice, with tools for implementing and evaluating their services (RNAO, 2015a).

1.3.4 The Effectiveness of NPs

Dr. Michelle Acorn, an advocate for the new role, was the first NP to be an MRP in Ontario. She implemented this model in 2012 within the context of care for seniors at the Lakeridge Health Whitby, a post-acute community hospital in Ontario (Hurlock-Chorostecki & Acorn, 2018). Acorn (2015) conducted a study to evaluate the effectiveness of the NP as MRP model of care. Using a mixed-methods design, the author found that NPs as MRPs provide timely, safe, and quality care while contributing to positive patient outcomes, and a positive patient, family, and staff experience (Acorn, 2015). Following the study, Dr. Acorn co-authored an article describing the implementation of the NP as MRP model at the Lakeridge Health Whitby (Hurlock-Chorostecki & Acorn, 2018).

Much research has evaluated NPs' practice in primary care and hospital settings where they are part of an interdisciplinary team that has a physician as the MRP (DiCenso et al., 2010; Gardner et al., 2014; Hurlock-Chorostecki et al., 2008; Kilpatrick et al., 2010; Kilpatrick et al., 2012b; Mcdonnell et al., 2015; Wood, 2016). Several authors have found that the care provided by NPs leads to a positive patient experience due to their holistic approach and coordinated, continuous, fast and accessible care (Gardner et al., 2014 ; Mcdonnell et al., 2015 ; Sidani et al., 2010). The care given by NPs has been shown to be just as effective, safe, and competent as that provided by physicians (Horrocks, 2002; Scherzer et al., 2017; Wood, 2016; Zhu et al., 2016). Many studies have also evaluated the barriers and facilitators to the implementation of NPs within hospitals, though no studies have evaluated the barriers and facilitators of NPs as the MRP (Archibald & Fraser, 2013; Fox et al., 2018; Kilpatrick et al., 2012a; Kilpatrick et al., 2012b; Sangster-Gormley et al., 2011).

NPs can be employed as hospital employees or as part of the professional staff (OHA, 2012). Those who are employed as professional staff must apply for privileges to perform certain

acts such as admitting and discharging patients, which is granted by the hospital board of directors and renewed every year (OHA, 2012). These privileges need to be in accordance with the hospital's professional staff bylaws (OHA, 2012). Conversely, NPs who are employees of the hospital already have blanket privileges for diagnosing, prescribing, and treating patients, which may also include admitting and discharging patients depending on the duties established with their employer (OHA, 2012).

The role of NPs within the healthcare system has progressed over the past years. They have gained much autonomy that allows them to respond effectively to the healthcare needs of Canadians and the needs of the system. Their role continues to evolve, allowing them to further exercise their full scope of practice and improve healthcare delivery. Numerous studies have demonstrated the effectiveness of NPs, though less is known about the implementation and effectiveness of NPs as the MRP.

CHAPTER 2:

CONCEPTUAL FRAMEWORK

The introduction of a new role in an organization may affect stakeholder groups at different levels; a successful implementation will also be affected by these groups. In the case of NPs as MRPs, different levels of stakeholder groups in the organisation can influence their integration in healthcare teams. The interests and roles of such groups need to be considered as possible barriers or facilitators to the integration of NPs as MRPs. In this section, I present the conceptual framework that supports the development of this research project.

Kilpatrick et al.'s (2013) conceptual framework, “Conceptual framework of acute care nurse practitioner role enactment, boundary, and perceptions of team effectiveness ” is used to guide this thesis research project (Fig. 2.1). Kilpatrick et al.'s (2013) framework was created to identify how several key groups, such as the healthcare system and organization, the interdisciplinary teams, patients, and ACNPs affect the role enactment, boundary work, and perceptions of team effectiveness when ACNPs are introduced onto healthcare teams. The framework builds on Sidani and Irvine's (1999) model that used the Donabedian Structure-Process-Outcome model to evaluate the effectiveness of ACNPs in terms of the relationship between ACNP role enactment and patient outcomes (Kilpatrick et al., 2013). They used a descriptive multi-case study of two similar hospital units to explore: “how ACNP role enactment and boundary work of team members affected the team’s perceptions of team effectiveness” (Kilpatrick et al., 2013, p. 208).

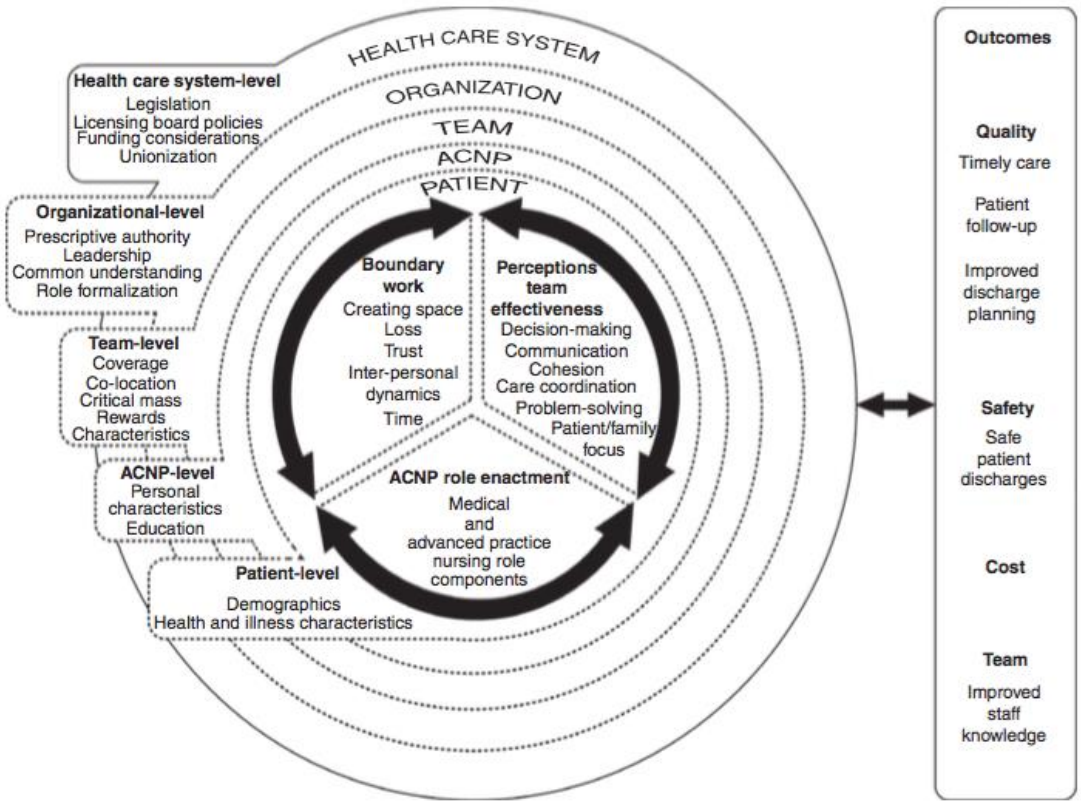

Fig. 2.1 Conceptual framework of acute care nurse practitioner role enactment, boundary work, and perceptions of team effectiveness (Kilpatrick et al., 2013).

According to Kilpatrick et al.'s (2013) conceptual framework, several key elements must be considered before ACNPs are introduced onto a healthcare team. The elements, which are central process dimensions to the conceptual framework, are: role enactment, boundary work, and perceptions of team effectiveness. They are key components for the day-to-day working of the healthcare team. According to the framework, the central process dimensions are interdependent and closely related, so that one dimension affects the other in influencing the introduction of ACNPs onto the healthcare team (Kilpatrick et al., 2013).

The first element, role enactment, represents: "the activities actually undertaken by providers" (Kilpatrick et al., 2012b, p. 851). This key element involves the context of practice

and the structures in place that affect ACNPs' ability to exercise their role (Kilpatrick et al., 2013). Second, boundary work is defined as: "a process of shifting professional boundary lines between groups when a new role (is) introduced in the healthcare team" (Kilpatrick et al., 2013, p. 212). The process of shifting boundary roles and how the team goes about it will affect the introduction of an ACNP onto the healthcare team. Since NPs perform medical acts, their practice overlaps with the roles of physicians, which may affect the healthcare team's dynamic practice. Kilpatrick et al. (2012a) mentioned five concepts in boundary work that need to be considered by different stakeholder groups: 1) creating space, 2) trust, 3) loss of valued function, 4) interpersonal dynamics, and 5) time. These concepts were included in the conceptual framework (Kilpatrick et al., 2013). Finally, the third element, perceptions of team effectiveness, represents the views of the interdisciplinary team regarding what the NP brings to the team, and how this contributes to teamwork and the delivery of patient care (Kilpatrick et al., 2013). Concepts like decision-making authority, communication with the team, team cohesion, and coordination of care were identified by Kilpatrick et al. (2013) as indicators of the team effectiveness element.

Kilpatrick et al.'s (2013) framework identifies different structures, and various stakeholder groups that affect the introduction of ACNPs. These include the patient, the ACNP, the healthcare team, the organization, and the healthcare system. These structures sit at different levels in the healthcare system, each influencing the ACNP's role in their own way (Kilpatrick et al., 2013). The first stakeholder group, the patient group, exerts the most direct influence on the three central dimensions (i.e., boundary work, role enactment, and perceptions of team effectiveness). As the circles expand and move away from the center, the stakeholder groups' influence on the process dimensions become less direct, though still having an impact. For example, the furthest circle, the healthcare system, affects the introduction of the ACNP role

through legislation, licensing board policies, funding considerations, and unionization (Kilpatrick et al., 2013). For each structure, the authors identified key concepts that influence the process dimensions by constraining or expanding the central process dimensions. The more constrictive the factors, the more difficult it is to successfully introduce an ACNP onto the team. This will affect the day-to-day work of the team. For example, at the healthcare system level, legislation, licensing board policies, funding considerations, and unionization will influence the process of introducing an ACNP onto the healthcare team (Kilpatrick et al., 2013). At the organization level, the prescriptive authority given to ACNPs, leadership, common understanding of the ACNP's role, and the formalization of the role will affect the introduction of ACNPs onto the healthcare team. For instance, unclear licensing board policies will affect the prescriptive authority given by the organization, which may influence the perceptions of team effectiveness, role enactment, and boundary work (Kilpatrick et al., 2013).

The framework does not define the concepts enumerated in the different healthcare system level and process dimensions. The definitions of the concepts from the process dimension of boundary work are defined in another study done by Kilpatrick et al. (2012a). With the results of this study, definitions for each concept were created and have been put in a glossary (see Appendix A).

In short, the role enactment, boundary work, and perceptions of team effectiveness with regards to the ACNPs introduction onto the healthcare team are affected by multiple stakeholders at different levels within the healthcare system. After introduction of an ACNP onto the team, its effectiveness can be evaluated by looking at several outcomes identified in this framework. These outcome indicators include quality of care, safety, cost, and team work (Kilpatrick et al., 2013). The outcomes were identified by the participants in Kilpatrick et al.'s (2013) study as indicators that they could use to evaluate the team's effectiveness and performance. This framework

explains how the processes and structures that are in place can influence the outcomes of care following integration of an ACNP.

This framework was used to guide and support this thesis project. The indicators mentioned above were used as key topics during interviews and contributed to developing the interview guide. The framework explains how each stakeholder group in the healthcare system interacts with each other, and how they can influence the introduction of ACNPs onto healthcare teams. Thus, the framework is useful for exploring the barriers and facilitators to the integration of NPs as MRPs in hospitals, as the concepts and stakeholder groups mentioned in the framework may influence the integration of this model of care. This framework can also improve our understanding of the barriers and facilitators in relation to the structure/process/outcome model. The framework was specifically created for the introduction of acute care nurse practitioners; the role of the MRP was not considered. Nevertheless, the framework remains pertinent to the context of introducing NPs as MRPs, because they remain ACNPs and have similar working conditions, evaluation indicators, and outcomes. The main difference lies in the added responsibilities of being the MRP. This was considered while the interview guide was being developed by referring to the added responsibilities of being the MRP, such as admitting and discharging privileges, increased autonomy, and absence of a physician's supervision when analyzing results.

CHAPTER 3:

LITERATURE REVIEW

Kilpatrick et al.'s (2013) framework provides a greater understanding of the critical elements for integrating ACNPs onto healthcare teams. From this framework, key concepts were used to understand the integration of NPs as MRPs in acute care. The following sections presents the literature review. The sections are organised from the micro-level (patient-level) to the macro-level (healthcare system-level) as shown in the framework. This literature review addresses patient experience, social, political and financial barriers as well as facilitators to NPs' practice, and clinical and cost effectiveness of NPs.

3.1 Search Strategy

CINAHL, ProQuest-Nursing, Allied Health Database, and Google Scholar databases were used to retrieve research articles using the following search terms and their synonyms: nurse practitioner, advanced practice nurse, nurse practitioner as most responsible provider, barriers, facilitators, hospital, acute and tertiary care, cost effectiveness, implementation of nurse practitioners, integration of nurse practitioner, patient experience, patient satisfaction and patient-centered care, effectiveness of care, clinical outcomes, outcome indicators, clinical effectiveness, effective care and healthcare delivery. The selected studies had to be published in peer-reviewed journals, and published after 2010 to ensure they reflected current and changing NP legislation. Only studies from North America, Australia, and Europe were selected to maintain a similar context of practice (i.e., method of remuneration, level of autonomy, scope of practice). Twenty-five articles met the original criteria for inclusion, and ten more articles were retrieved using the references from those articles. Additional articles were selected from the suggestions made by the Mendeley reference manager.

3.2 Patient Experience

Patient experience is defined as the patients' perception and experiences of the care they receive (Ahmed et al., 2014). It is evaluated through patient feedback and it is based on both their subjective experiences and objective evaluation criteria (Ahmed et al., 2014). Alongside clinical effectiveness and patient safety, patient experience is considered a key component of high-quality healthcare provision (Ahmed et al., 2014; Doyle et al., 2013). Indicators for identifying and defining patient experience include continuity, coordination, effective, and timely access to care, involvement of patients and families in decision-making, provision of emotional support, and conveyance of information in a clear and comprehensible way that is tailored to the patient's needs (Doyle et al., 2013).

Mcdonnell et al. (2015) have reported that patients' experience with care received from NPs was positive. These authors conducted a collective case study comprised of three individual mixed-methods case studies in a hospital in England. These case studies were carried out in clinical areas where NP roles were introduced. The clinical areas included medicine, surgery and orthopedics units. The aim was to evaluate the impact of implementing the NP role on patients', staff members' and organizational outcomes. They interviewed 13 stakeholders with insight into the role implementation and/or development, six NPs, as well as 25 interdisciplinary team members and seven patients. The authors reported that the NPs had a positive impact on patient experience because of their holistic approach (Mcdonnell et al., 2015). More specifically, the holistic nature of NPs' assessments and their ability to understand the patients' perspective were factors that contributed to a positive patient experience. Furthermore, the continuity of care provided by the NPs and their thorough communication were other reported factors found to positively impact patient experience (Mcdonnell et al., 2015).

Having NPs in hospitals increases the accessibility and timeliness of care, while still meeting quality and competency standards (Gardner et al., 2014; Sidani & Doran, 2010; Wood, 2016). Wood (2016) conducted a retrospective cross-sectional design study aimed at evaluating the economic and quality outcomes associated with a collaborative NP and hospitalist physician group (N=100 patients) compared to the usual hospitalist physician-led group (N=100 patients). The results demonstrated that the collaborative care group performed better on two of the three experience of care measures, including overall quality of hospital stay and perception of teamwork (Wood, 2016). Furthermore, the presence the NP on the unit during the day allowed to address patients' needs quickly and provided patients and family greater accessibility to the provider team (Wood, 2016). The latter was related to increased patient satisfaction and a positive experience of care (Wood, 2016). Sidani and Doran (2010) support these findings as they found that ensuring that patients received timely and accessible care reduces distress and increases patient satisfaction. More details regarding this study are described in the next paragraph.

The presence of NPs in hospital settings contributes to better continuity of care, and thus enhances the patient experience (Cowley et al., 2016; Fremont et al., 2001). Cowley et al. (2016) conducted a qualitative case study (N=8) evaluating the multidisciplinary team's experiences after implementing NPs on acute care units for older adults. They found that the NPs' role facilitated continuity of care because of their continuous presence on the unit, which was beneficial for patient care (Cowley et al., 2016). Sidani and Doran (2010) conducted a nonexperimental repeated-measure study that examined the relationship between processes (co-ordination of care, and provision of counseling and education) and outcomes (symptom resolution, functional status, and satisfaction with care) from care provided by acute care nurse practitioners on inpatient units. In their study, participants reported that the care received was

well coordinated and participants did not experience delays. They also found that NPs initiate comprehensive discharge planning and transitional care in care. These factors contributed to increased patient satisfaction and improved mental health and functional abilities (Sidani & Doran, 2010).

Patients appreciate NPs' holistic approach to patient care (Mcdonnell et al., 2015 ; Stahlke et al., 2017). In their study, Stahlke et al. (2017) interviewed nine patients about their experiences and perspective receiving NP-led care at an outpatient breast cancer clinic. They found that NPs provided personalized, holistic care that considers all of an individual's bio-psycho-social aspects. This style of care is more inclusive, comforting, and supportive, and it promotes a better patient experience (Stahlke et al., 2017). Similar findings regarding NPs' provision of holistic care were also reported in other studies (Mcdonnell et al., 2015, Cowley et al., 2016, Van Soeren et al., 2009, Acorn, 2015).

In addition to their holistic approach, NPs empower patients through education and counselling to promote self-efficacy (Frost et al., 2017; Sidani & Doran, 2010). Such patient-centered care fosters a relationship of trust, empathy, openness, and respect between the patient and the NP to improve the patient's experience (Frost et al., 2017).

Communication is another key component of patient experience. NPs' approach promotes a holistic partnership with patients by spending the time needed to communicate with them, to properly learn their needs, and to provide education, support, and reassurance (Mcdonnell et al., 2015).

3.3 Social Barriers to Nurse Practitioners' Practice

In the context of hospital care, NPs mostly practise on a consultative and shared-care basis (Acorn, 2015; Hurlock-Chorostecki et al., 2008). In their descriptive study on the practice

of ACNPs in Ontario, Hurlock-Chorostecki et al. (2008) found many barriers to independent practice in acute care settings. These included funding for the position, confusion of other healthcare professionals as to the NPs' role, and the inability to implement care without a medical directive. Kilpatrick et al. (2012b) evaluated the integration of NPs onto a cardiology acute care interdisciplinary team. Their findings were similar to those of Hurlock-Chorostecki et al. (2008); NPs were not able to exercise their full scope of practice due to unclear role definition, and tensions regarding the relationship of power between the NPs and the physician, where physicians controlled the NPs' practice, which prevented them from acting autonomously (Hurlock-Chorostecki et al., 2008; Kilpatrick et al., 2012b). In a more recent study, the integration of NPs' role onto a multidisciplinary team was positively perceived by their peers, who indicated that NPs have a positive impact on patient care (Gardner et al., 2013). Nevertheless, the NPs still felt some resistance in being accepted onto the team (Gardner et al., 2013).

Despite the advancement in legislation towards NP practice, tensions with other healthcare professionals have been reported in the literature (Bryson, 2016; Cowley et al., 2016). The tensions can play a role in the healthcare professionals' resistance to fully accepting the role of NPs (Kilpatrick et al., 2012a). Kilpatrick et al.'s (2012a) descriptive multi-case study on boundary work following the introduction of an NP onto a multidisciplinary team found that tensions between healthcare professionals (doctors, nurses and physiotherapists) arose from the overlap of scope of practice, which led to a loss of role function. Physicians were particularly affected by this, especially in regards to the right to prescribe, which is most often associated with their role. Having to share that right was compared to "giving away one of their most sacred rights" (Kilpatrick et al., 2012a, p. 1510). A loss of role function was also brought up by nurses in the study, as the NPs assumed the responsibility of communicating and collaborating with the

physician given their deep knowledge of the patient. In particular, this affected the experienced nurses as their expertise was less often sought and their interactions with physicians decreased (Kilpatrick et al., 2012a). Another study mentioned the "de-skilling" of junior doctors (Halliday et al., 2018). From the interviews with doctors and nurses to evaluate their perception of the role of an in-patient NP, the authors found that the NPs were assuming the care that otherwise would have been provided by the junior physicians, which hindered their skill development and knowledge acquisition.

The lack of understanding about the NPs' role and scope of practice is another hindrance to their full integration into healthcare institutions (Fox et al., 2018; Kilpatrick et al., 2012a). Fox et al.'s (2018) case study explored factors that influenced the sustainability for NPs in multidisciplinary teams. Their study showed that the medical, nursing, and management staff lacked an understanding of the NPs' role and the services they provide. Other authors support these findings (Elliott et al., 2016; Kilpatrick et al., 2012b). These factors can negatively influence team cohesion, communication, and inclusion on the team (Fox et al., 2018). Although the lack of team cohesion did not influence the team's effectiveness to provide care, it created a poor dissemination of information to team members.

Although some confusion may be present about the definition of the NPs' role, Cowley et al. (2016) studied the effect of a ward-based NP (under the supervision of a staff physician) on a multidisciplinary team and found that the role bridges the gap between nurses and physicians to allow better multidisciplinary teamwork. The clinical experience and knowledge of NPs from both medical and nursing disciplines encouraged a vision of holistic patient-centered care (Cowley et al., 2016). Other studies have reported similar findings (Halliday et al., 2018; Mcdonnell et al., 2015; Williamson et al., 2012). For instance, Mcdonnell et al. (2015) conducted a qualitative case study evaluating the impact on patients, staff members, and organizational

outcomes after the implementation of NPs on three different hospital units. The authors interviewed stakeholders with insight into the NP role implementation and development, including ACNPs, members from the interdisciplinary team (nurses, physicians, ward managers, etc.) and patients from each unit. They found that the NPs had a positive impact on staff members as they were easily approachable, provided advice and support to their colleagues (including physicians), decreased the workload for other team members, and improved the teamwork (Mcdonnell et al., 2015).

Finally, NPs often find themselves to be alone in their position (Andregård & Jangland, 2015; Elliott et al., 2016). This can make it difficult to enact their leadership role or stand up for their profession as they are alone to assume their clinical responsibilities and lack peer support (Elliott et al., 2016).

3.4 Political Barriers to Nurse Practitioner Practice

A major component that prevents greater integration of NPs in health institutions is the lack of political initiatives to create policies that may better structure and support the NP role. Many Canadian studies have shown the effects of the poor political initiative and lack of organizational support (Fox et al., 2018, Martin-Misener, 2010; Archibald & Fraser, 2013). In particular, Fox et al. (2018) found that the lack of organizational support, workforce, and excessive role restrictions influence NPs' sustainability and make it difficult for NPs to exercise their role. The lack of organizational support resulted in an inadequate implementation of the role (Fox et al., 2018). Moreover, NPs' scope of practice, responsibilities in the multidisciplinary team, and operational processes of their services were not clearly defined. This resulted in the medical and management staff's misunderstanding about their role, which led to the isolation and lack of communication with the NPs with regards to collaborative decision-making and the role

of NPs (Fox et al., 2018). Excessive restrictions on their practice impeded their full scope of practice and the effectiveness of the service they provide. For example, the NPs were mostly assigned to low acute patients that prevented from using their skills. Elliott et al. (2016) also found that the lack of administrative and clerical support can take time away from NPs engaging in other non-clinical leadership activities.

Another political barrier preventing the integration of NPs in healthcare institutions is the traditional medical hierarchy where nursing is ranked below medicine (Andregard & Jangland, 2015). The different views and paradigms often create a conflict that makes it difficult to introduce a new role (van Kraaij et al., 2020; Andregard & Jangland, 2015). This prevents NPs from utilizing their full skills, effective collaboration between the two professions and gaining authority to influence decision-making position and participate in developing healthcare services (Elliott et al., 2016).

The inconsistencies in practice throughout the Canadian provinces, and the lack of federal legislation to standardize NPs' care delivery can hinder their integration in healthcare institutions (Archibald & Fraser, 2013). They may have the right to perform a certain act in one province; for example, prescribing all medications, but in another province, the same practice may be more restricted (Archibald & Fraser, 2013). This can impede the advancement of the profession and limit public awareness about the role (Archibald & Fraser, 2013). This conclusion has been supported by many studies that have found a lack of organizational support, policies, and legislation to encourage and regulate the practice of NPs (Burgess et al., 2011; Fox et al., 2018; Poghosyan et al., 2013). Moreover, the inconsistencies of regulation and legislation contribute to the unclear definitions of NP roles and scope of practice (Martin-Misener, 2010). Consequently, this has led to misunderstandings about the role of NPs and their reduced credibility among other

healthcare professionals, making it difficult for them to completely integrate onto healthcare teams (Martin-Misener, 2010; Killpatrick et al., 2012a).

Another major barrier to practice is the way in which the public views NPs (Archibald & Fraser, 2013). Since they were implemented as an efficient way to provide cost-effective medical care, society tends to view them as "mini doctors" (Archibald & Fraser, 2013). This has prevented NPs from being viewed as unique professionals with a distinctive role on multidisciplinary teams, and providing their own capabilities and perspectives (Archibald & Fraser, 2013).

3.5 Financial Barriers to Nurse Practitioners' Practice

The main financial barrier preventing NPs from integrating onto healthcare teams is the fee-for-service payments for physicians (Archibald & Fraser, 2013; Martin-Misener, 2010). Contrary to physicians who bill the provincial Health Ministry for their services, NPs work for a salary, which can create tensions between the two professional groups (Doetzel et al., 2016; Martin-Misener, 2010). A reduction of the physicians' workload (that would be taken on by NPs) would decrease their income (Martin-Misener, 2010). Thus, both groups would be competing for funding, which would tend to prevent their effective collaborative practice (Doetzel et al., 2016). In addition, the government does not entirely fund NP practice, leaving it up to the NPs to pay the costs to support it, such as clerical work and physician consultations (Heale & Butcher, 2010). This makes it difficult for NPs to practice independently in the public health sector, and instead, they tend to integrate with an existing practice, such as a family health team (Heale & Butcher, 2010).

3.6 Facilitators to Nurse Practitioners' Practice

The factors that can be barriers can also act as facilitators. For example, Niezen and Mathijssen (2014) discussed, in their systematic review, the reallocation of traditional medical tasks to nursing. They mentioned four themes in the barriers and facilitators that included knowledge and capabilities, professional boundaries, organizational environment, and institutional environment. The NPs' effective interpersonal skills and knowledge of their scope of practice and capabilities facilitated the reallocation of tasks as their care was viewed as a positive addition to the team (Niezen & Mathijssen, 2014). The idea of professional boundaries was also raised by Kilpatrick et al. (2012a) and discussed earlier on. Niezen and Mathijssen (2014) reported similar findings where the type of task being reallocated, trust, physician-NP collaboration, NPs' qualification, physician's education, and job security could act as a barrier or facilitator to the integration of NPs. The level of trust between physicians and NPs, the openness of physicians towards the role, and well experienced and qualified NPs will promote a positive collaboration between these professional groups, thus facilitating the NPs' integration onto the team (Niezen & Mathijssen, 2014). Casey et al.'s (2019) qualitative descriptive study, which described the enablers and challenges for the implementation of advanced nursing and midwifery practice roles, had similar findings. The interviews that were held with various stakeholders, nurses, and midwives working in advanced practice roles showed that proper peer support from medical colleagues and nurse manager was an enabler for the implementation of their roles. Having a clearly defined role also improved team collaboration (Andregård & Jangland, 2015). Finally, having experience working with NPs was also identified as a factor for successfully implementing their role (Niezen & Mathijssen, 2014).

Organizational factors were considered in this literature review, and Fox et al. (2018), for example, mentioned that poor organizational support and understanding of the NP role could

hinder its sustainability. The presence of clear organizational policies, including protocols and formal procedures, facilitates task reallocation and decreases restrictions of the NP's role (Niezen & Mathijssen, 2014). In addition, Fox et al. (2018) mentioned that proper facility arrangements for NPs, such as sufficient space to work and adequate workforce, is necessary to ensure the sustainability of their role (Niezen & Mathijssen, 2014). Proper organizational and administrative support, and an adequate physical work environment was also discussed by Casey et al. (2019) as being enablers to the development and implementation of advanced nursing roles. Niezen and Mathijssen (2014) supported these findings, especially for facilitating the collaboration between NPs and physicians.

Institutional factors were also reported in this literature review. Legislation, socio-economic forces, governmental policies, and patients' perception are external factors that affect the reallocation of tasks between physicians and nurses (Niezen & Mathijssen, 2014). These were mentioned earlier as barriers to NP practice. Nevertheless, socio-economic factors can also be facilitators as the healthcare system changes. The demand for cost containment, and the shortage of physicians tend to increase the need for the integration of NPs as an innovative alternative to care delivery (Niezen & Mathijssen, 2014).

3.7 Clinical Effectiveness of Nurse Practitioners' Care

The concept of effectiveness is defined as: "the realized fraction of what is achievable" (Donabedian, 1988, p. 1743). Effectiveness of care is when the care being given produces the intended results (Stanik-Hutt et al., 2013). Clinical effectiveness can be evaluated by looking at the attainment of objective clinical outcomes, such as health and functional status, or length of stay and readmissions rates, and it is one of the pillars for assessing the quality of healthcare (Doyle et al., 2013; Stanik-Hutt et al., 2013). NPs are reported to be knowledgeable and able to

provide safe, effective, and competent care (Acorn, 2015; Gardner et al., 2014; Horrocks, 2002; Jennings et al., 2015; Mcdonnell et al., 2015). Horrocks et al. (2002), in a meta-analysis of randomized controlled trials (N=11) and observational studies (N=23), compared NPs' and physicians' care. They found that NPs provided primary care with patient health outcomes equivalent to those provided by physicians. In addition, patient satisfaction and quality of care has been found to be superior when NPs are the providers (Horrocks et al., 2002). These findings are similar to those from a systematic review done by Stanik-Hutt et al. (2013). They reviewed studies (N=37) that evaluated patient outcomes, and the quality and safety of care given by an NP working either alone or with a physician group, in comparison to a physician group without an NP. They found that patient satisfaction, number of emergency department visits, patients' blood sugar and blood pressure, and patient mortality rates were similar for the NP and the physician groups (Stanik-Hutt et al., 2013).

Research has demonstrated that NPs are effective in both primary and hospital settings. Roots and MacDonald (2014) evaluated the impact of the implementation of a NP in a collaborative primary GP family practice. The impacts were evaluated at the practitioner, practice, community, and acute care health service levels. The authors found that the integration of an NP increased access to primary care, and education about health promotion and disease prevention, while decreasing the waiting times for appointments. It also allowed older patients to receive home care. These improved services also decreased the number of emergency visits (Roots & MacDonald, 2014). In sum, the study showed the positive impact and effectiveness of the implementation of an NP in primary care.

Scherzer et al. (2017) conducted a retrospective study comparing an NP and a resident-staffed medical ICU. They reported no significant difference between the groups in regards to mortality and readmission rates, length of stay post discharge from the ICU, or cost of care. The

length of stay in the ICU, however, was longer for the NP group than the physicians. This was likely due to the more chronically and critically ill patients assigned to the NP group (Scherzer et al., 2017). In another retrospective study in a hospital setting, Zhu et al. (2016) compared an NP-run chest pain unit (functioning according to clinical pathways), to traditional physician care. In contrast to the previous study, these authors found that length of stay in hospital for patients in the NP-run unit was shorter than for patients who received traditional physician care. Rates of readmission were also found to be lower (Zhu et al., 2016). The authors concluded that care given by NPs was safe and effective. Finally, NPs follow best practice guidelines and are confident with the decisions they make such as in prescribing medication (Fox et al., 2018). Their peers also manifest confidence in their clinical judgment and decisions (Gardner et al., 2014). No studies were found in this review that suggested NPs' care was less effective than the physicians' care.

The constant presence of a practitioner on the ward also contributes to clinical effectiveness (Halliday et al., 2018). Halliday et al.'s (2018) descriptive phenomenological study examined the perception of ward staff on an inpatient NP role. The staff (including nurses and physicians) were reported to appreciate the NP's constant presence as it provided stability for patient care, faster patient discharges, and improved flow (Halliday et al., 2018). These findings support those of Mcdonnell et al. (2015) that were mentioned earlier.

3.8 Cost-Effectiveness of Nurse Practitioners

Originally, NPs were introduced into the healthcare system in response to the rising healthcare costs and the need for cost containment (Angus & Bourgeault, 1999). NPs are viewed as being a cost-effective alternative to physicians (Bauer, 2010). Nevertheless, in hospitals, NPs typically work as salaried employees (OHA, 2012; NPAO, 2019), and some NPs may work in

hospitals as professional staff, considered to be like “independent contractors” who bill the hospital based on an hourly or daily rate (NPAO, 2019). Unlike physicians, however, who bill the provincial government (in Ontario the Ontario Health Insurance Plan for their services), NPs are paid through the hospital’s budget (NPAO, 2019). Therefore, the cost for a hospital to employ an NP would likely be higher than for a physician, which creates a disincentive for hospitals to introduce NPs into their care models. Despite this difference, many studies have demonstrated that NPs provide cost-effective and high quality care (Bauer, 2010).

Two systematic reviews evaluating the cost effectiveness of NPs in hospitals were found in the literature. Kilpatrick et al. (2015) conducted a multi-component systematic review of randomized control trials (N=2) to assess the cost effectiveness of NPs in inpatient settings between 1980 and 2012. They concluded that patient outcomes were equivalent for the care provided by NPs and physicians (Kilpatrick et al., 2015). The review had a limitation in that the cost-effectiveness ratios for care outcomes and cost of care were not included, which weakened the evaluation (Kilpatrick et al., 2015). The review was also limited because of the small sample size. The studies were done in different settings with small populations, and thus their generalizability may have been limited. This decreased the quality of evidence to support the cost effectiveness of NPs in inpatient settings (Kilpatrick et al., 2015).

The second systematic review by Jennings et al. (2015) included articles published between 2006 and 2013 (N=14) that evaluated cost, quality of care, satisfaction, and/or wait times of care provided by NPs in the emergency department. Like Kilpatrick et al.’s (2015) study, the reviewed articles were heterogenous and the review lacked complete and comparable statistical data to draw clear conclusions (Jennings et al., 2015). Of the 14 papers included in the review, one specifically evaluated cost effectiveness (McClellan et al., 2012). In the study, the authors found that cost of care was equivalent for medical staff and NPs. This study also had

limitations in terms of generalizability due to the small sample size (Jennings et al., 2015; McClellan et al., 2013). Despite the limitations, Jennings et al. (2015) demonstrated that NPs had an impact on patient satisfaction and decreased the emergency wait times. In general, both reviews mentioned that to promote NPs, an evaluation of the impact of NPs, including their cost effectiveness, needs to be evaluated more rigorously preferably through randomized controlled trials. This kind of data is important as the decisions by policy makers and hospital administrators rely on such findings to safely support and implement NPs.

In a retrospective secondary analysis of return of investments after NPs were implemented at three different US hospital inpatient units, Kapu et al. (2014) evaluated billing revenue and cost savings related to length of stay and quality outcomes, in comparison to a medical center without NPs. The authors reported that the units with integrated NPs had a decreased average of length of stay resulting in a significant cost savings (Kapu et al., 2014). In addition, the revenue from the NPs' billing was greater than their expenses even after considering their lower salary. This also contributed to the cost savings (Kapu et al., 2014). Finally, the use of quality indicators specific to each unit, such as DVT prophylaxis use, length of stay of central line devices, use and length of stay of urinary catheters, etc., were evaluated. The authors reported that the electronic tool to track the use of these quality indicators was used by the NPs. This practice promoted cost avoidance related to hospital acquired complications since the care was standardized and only best practices were used. These were associated with the decreased expenditures (Kapu et al., 2014). Similar findings were reported by Collins et al. (2014) in a retrospective study comparing the cost effectiveness of a level I trauma unit before and after NPs were integrated onto the team. Collins et al. (2014) also found that length of stay was decreased, contributing to significant cost savings. The authors explained that the continuous presence of an NP on the unit increased continuity, access, timeliness, and coordination of care, which in turn

decreased the length of stay. Indirectly, this contributed to the decrease in cost of care (Collins et al., 2014). The authors further explained that the cost savings from the decreased length of stay outweighed the costs to hire more NPs, which made it beneficial for the organization to implement this role. A similar study by Morris et al. (2012) found comparable results. They compared a trauma unit run by unit-based NPs to the traditional model led by residents; both models were supervised by an attending physician. The average length of stay for patients in the unit with NPs was lower than that in the traditional resident-led model (Morris et al., 2012). In contrast to the study by Collins et al. (2014), the difference in average length of stay was not statistically significant, though it was clinically significant. Despite the smaller difference, the reduction still contributed to important decreases in healthcare costs (Morris et al., 2012). Like the study by Collins et al. (2014), Morris et al. (2012) attribute these improvements to the presence of NPs on the unit and their participation in the multidisciplinary rounds, an activity that was not done by the residents. The continuous presence of NPs contributed to an increased coordination of care by allied healthcare providers, which increased the efficiency of care (Morris et al., 2012). The authors also reported that the NPs' care was equivalent to the traditional resident care, in terms of quality indicators and readmission rates.

A number of documents from the grey literature, such as the *NP Utilization Toolkit* (RNAO, 2015a) and the OHA (2012) guide, *Enabling nurse practitioners to admit and discharge: A guide for hospitals* have been published to help guide the implementation of NPs as MRPs. Although these documents show the value of NPs as MRPs, a knowledge gap still remains in the scientific literature regarding this role.

This literature review provided evidence that NPs have a positive effect on patient experience, and the clinical and cost effectiveness. Nevertheless, other than Acorn's (2015) study, the NPs were not practising independently. They were either working in collaboration with

physicians, using medical directives or clinical pathways in providing care or they were supervised by a physician. The new title of MRP allows NPs to practise independently and to use their full scope of practice, without requiring a physician's supervision; adding more responsibility to their role. Given the limited implementation of the NP as the MRP model in Ontario, little support is shown for NPs who wish to undertake this role. This may create more barriers and challenges to the enactment of this model of care. The effectiveness and impacts of the role, and the barriers and facilitators to its implementation in acute care centers, should be evaluated. This will further our understanding of the logistics and implications for healthcare organizations and interdisciplinary teams when introducing the role of NP as the MRP.

CHAPTER 4:

METHODOLOGY

This study explores the barriers and facilitators to the integration of the NP as MRP model of care within a hospital setting. This study consists of a secondary data analysis of the mixed-methods project conducted by Dr. Michelle Lalonde: *Infirmières praticienne dans le rôle de professionnel de la santé le plus responsable: Évaluation d'un modèle innovateur de soins chez une population gériatrique à risque de fragilité admise sur une unité de médecine axée sur le regain d'autonomie.* The project evaluates the effectiveness of the NP as MRP model of care and the patient, family, and staff experiences. I am the research assistant for the larger NP as MRP study and have been involved in all phases of the project. I worked on developing the interview guide and protocol for approval by the Research Ethics Board of the University of Ottawa and the hospital where the study was conducted, and on the recruitment and data collection. This chapter presents the methodology of this thesis project, which is guided by the following research question: What are the barriers and facilitators to the integration of the NP as MRP model of care as perceived by the healthcare team members using the model?

4.1 Summary of the Methodology of the Larger Project

To understand this secondary analysis, the methodology for the larger study is described below.

4.1.1 Purpose of the Larger Study

The purpose of the larger project was to evaluate the effectiveness of the NP as MRP model of care on a medicine/rehabilitation unit in a francophone hospital in Ontario, Canada. The objectives of the larger project were to:

(1) Describe the NP as the MRP model and compare it to the "traditional model" of care on a nursing unit. The following variables were described and compared pre and post implementation of the model: a) Number of patients admitted, treated, and discharged; b) Normalized hospital mortality ratio; c) Median length of stay; d) Destination of discharge (home versus residence versus long-term care); e) Cost per days presence; f) Cost per weighted case; and g) 30-day readmission rate.

(2) Explore the experiences of other healthcare professionals involved in the NP as the MRP model of care.

4.1.2 Design of the Larger Study

The design of the larger project was a mixed methods study using pre and post hospital administrative data, and individual interviews with healthcare professionals who had used the NP as MRP model of care.

4.1.3 Setting of the Larger Study

The hospital where the larger study took place was a francophone academic hospital in Ontario. This hospital implemented the NP as MRP model of care on their medicine/ rehabilitation unit between July 2016 and July 2018. The unit is mostly dedicated to geriatric patients who are at risk of frailty after their hospitalization in acute care. Care is focussed on patients regaining their strength and independence to allow a safe discharge back to the community. Before this model of care was implemented, ten patients were cared for by the physician present on the unit, while the other ten patients were under the care of hospitalists with weekly rotations. With the NP as MRP model of care, one NP cared for ten patients who otherwise would have been cared for by rotating hospitalists. The NP as MRP model of care was discontinued in July 2018 and the traditional model of care was resumed.

4.1.4 Sample for the Larger Study

Sampling for the larger study was accomplished using a purposive strategy. This method allows the researcher to choose particular individuals who will most likely provide relevant information about the phenomenon under study (Sandelowski, 1995). Participants were selected based on the research question of the larger study (Cleary et al., 2014). The research question for the larger study was: "Qu'elle est l'efficacité du modèle de soins de l'IP PPR au regard des indicateurs de qualité et performance de [l'hôpital X] sur une unité de regain d'autonomie à [l'hôpital X]?"

In determining the number of interviewees, Sandelowski (2000) suggests that qualitative descriptive studies should adopt purposeful sampling with maximum variation. This method implies that a phenomenon is explored through a variety of different cases that all share the same interest in the phenomenon (Sandelowski, 1995, 2000). According to Sandelwoski (1995), it allows: "to have a representative coverage of variables likely to be important in understanding how diverse factors configure a whole" (p. 182). Therefore, to capture the various perspectives of the studied phenomenon, multiple stakeholders need to be included who have been involved with this model of care. Maximum variation of the participants was based on their employment title and position in the organization.

The qualitative component of the larger study was an exploration of the experiences of healthcare professionals who were involved with the NP as MRP model of care. On the unit where the NP as MRP model was implemented, the following team members were present: registered nurses (RNs), registered practical nurses (RPNs), physiotherapists (PTs), occupational therapists (OTs), social workers (SWs), pharmacists and physicians. In addition, several members of the hospital leadership team were involved with the integration of the model of care. Therefore, individuals in both the interdisciplinary and leadership teams were sought for

interviews. Inclusion criteria were: 1) Member of the interdisciplinary care team on the unit; 2) Worked with the NP as MRP model of care; 3) Leadership involved with the integration of the model of care; and 4) Ability to read and speak English or French.

4.1.5 Recruitment for the Larger Study

Recruitment for the larger NP as MRP study used two strategies. Potential participants were identified by a member of the research team who was an employee of the hospital that was not in a hiring or supervisory position. First, all participants were recruited through email for the qualitative part of the larger study. Members of the interdisciplinary team who worked on the unit where the NP as MRP model was in place, and physiotherapists and occupational therapists received a recruitment email from the unit and the rehabilitation managers. Physicians, the Vice-President of nursing, nurses in leadership positions, and other members of the interdisciplinary team received a recruitment email from the thesis supervisor's (larger study PI) email account. One recruitment email was sent to the healthcare team members and another email template was sent to individuals in leadership positions (Appendixes B and C). The recruitment email contained an introduction to the proposed project, and a consent form. A consent form was sent to the healthcare team members (Appendix D) and another consent form was sent to individuals in leadership positions (Appendix E). Potential participants were invited to directly contact me, the research assistant for the larger project, for further information about the study or to participate. Two reminder emails were sent at two-week intervals following the first email if no answer had been received. In-person recruitment took place as the response rates to the recruitment emails were low, especially for the interdisciplinary team members and physicians. The invitation letter (Appendixes B and C) was spoken verbally to the potential participants

during a visit to the ALC unit. Potential participants were then provided with a paper copy of the invitation letter so they could contact me to book an interview time.

A consent form was sent to participants prior to being interviewed and the signed form was obtained in-person before the start of their interview (Appendixes D and E). The consent form described the larger NP study, and at the end, participants also had to consent to their data being used in this secondary analysis study. All participants consented for their data to be used in this secondary analysis.

4.1.6 Data Collection for the Larger Study

For the purpose of the larger study, semi-structured interviews comprised of open-ended questions were conducted (Appendixes F, G, H). The interviews had between nine and eleven questions. The interview guides were developed by the research team, including myself as the research assistant. The questions were based on the purpose of the larger study. At the beginning of the interviews, close-ended questions were asked to obtain socio-demographic information. The interviews allowed us to understand the participants' perception of the NP's role, their experience working with the NP as MRP model of care, their collaboration with the NP as the MRP, difficulties and benefits from working with this new model of care, and reasons that may have led to the discontinuation of this role. Seven interviews were held in-person at the hospital site in a private room to ensure confidentiality and two interviews were done over the phone. I conducted all of the interviews and each interview lasted from 30 minutes to an hour in length. Interviews were audio-recorded and transcribed by me and undergraduate research assistants that had been hired for the larger project.

4.2 Paradigm View

I approached this project for my thesis using a post-positivism paradigm. The paradigm emerged mainly to respond to the limited ways and problematic criticism of positivism (Guba & Lincoln, 1994). Although the beliefs in post-positivism remain heavily rooted in positivism, post-positivism philosophy modified the conceptualization of truth in positivism, valued theoretical explanations, and included different forms of evidence (i.e., qualitative) (Clark, 1998). The ontology of post-positivism lies in critical realism (Guba & Lincoln, 1994). In post-positivism, a reality is assumed to exist, though the reality is imperfect (Guba & Lincoln, 1994). Human flaws and the intractable reality of phenomena are recognized and considered in post-positivism (Guba & Lincoln, 1994), which warrants the need for a critical examination of reality (Guba & Lincoln, 1994). Post-positivism epistemology is characterized by a modified dualism, meaning that the idea of the investigator remaining completely independent from the entities being investigated is abandoned in post-positivism (Guba & Lincoln, 1994). Rather, in post-positivism, the investigator shapes the research process while remaining objective (Clark, 1998; Guba & Lincoln, 1994). Furthermore, in post-positivism, the truth is still sought, but the generality of knowledge does necessarily imply universality (Forbes et al., 1999). Thus, knowledge is context bound (Forbes et al., 1999).

This project aligns well with post-positivism views for many reasons. First, the project explores the barriers and facilitators to the integration of the NP as MRP model of care. This was achieved using a qualitative approach by understanding the perceptions of the stakeholders involved in this model of care. Post-positivism does not reject the notion that the truth can be found in personal experiences (Guba & Lincoln, 1994). Furthermore, qualitative methods are recognized as a source of inquiry in post-positivism (Guba & Lincoln, 1994). This project alluded to the presence of a reality/truth around the NP as MRP model of care; however, it did not seek a

universal truth. This view is congruent with the views of post-positivism, where time, place, and context are considered instead of a universal truth (Forbes et al., 1999).

Second, this study is heavily guided by Kilpatrick et al.'s (2013) conceptual framework. Post-positivism inquiry often generates knowledge that stems from facts that are derived from theories (Forbes et al., 1999). As such, this study builds on previous knowledge generated from Kilpatrick et al.'s (2013) study. The findings from this study are based on the concepts illustrated in Kilpatrick et al.'s (2013) conceptual framework.

Third, this project explores the barriers and facilitators to the integration of the NP as MRP model of care at one hospital site. Post-positivism allows for a broader understanding of the phenomena that reflects the context (Forbes et al., 1999; Guba & Lincoln, 1994). Although the study took place at one hospital setting, the findings may be transferable to other healthcare settings. According to Clark (1998), "findings are viewed as contextually related and could be inductively applied with reference to probability of the similar case holding elsewhere" (p. 1246). Therefore, the barriers and facilitators identified in this study may be transferable to other hospital settings by considering the context and differences between facilities.

4.3 Study Design

The following discusses the methodology used for this thesis study. Using principles from integrated knowledge translation (iKT), a qualitative descriptive design that used data collected for a larger study was used for this thesis project. A qualitative descriptive design was chosen because it can gather specific information about an event, situation, or phenomenon without an in-depth interpretation of the gathered data (Fortin & Gagnon, 2016; Sandelowski, 2000). It is used for a straightforward description of an event, mostly based on facts and people's experiences in that event, rather than deep personal life experiences (Sandelowski, 2000).

4.3.1 The Integrated Knowledge Translation Approach

iKT involves collaboration with key partners (knowledge users, KUs) who provide their expertise on a particular subject to ensure that the project and outcomes are relevant and useful to KUs (Canadian Institute of Health Research [CIHR], 2012). According to Kothari and Wathen (2013), collaboration between the researcher and KUs leads to: "research questions that are more practice or policy relevant; findings that are easier to adapt because they meet a knowledge-practice gap; the creation of a ready audience for implementation strategies; and an increased understanding of each other's roles" (p. 188). KUs are individuals from different disciplines who are often policy makers, decision makers, research funders, industry, clinicians, or the public (Graham & Tetroe, 2009). The KUs who were involved in this project are three NPs who were, or are currently, working as MRPs in a hospital setting in Canada. KUs can be involved in each step of the research process, including the development or refinement of the research question, selection of methodology, data collection, data analysis, and dissemination of results (CIHR, 2012). The engagement of KUs throughout the research process was based on the stages suggested by the Institute of Work & Health (Appendix I) (Van Eerd & Saunders, 2017). KUs were engaged within the context of the larger study with their involvement in refinement of the data collection tools (e.g., the interview guides). They were also engaged in a number of other aspects of this thesis study, such as the data analysis, discussion chapter write-up, and dissemination of results strategies. Table 4.1 explains the stages where the KUs were engaged. The KUs were consulted through individual phone and teleconference meetings, and emails as most of the KUs were out of town or at work during the day.

Table 4.1 Consultations with the knowledge users.

Meetings	Description
Introductory phone call meeting	The KUs were invited to be involved in this project through email. When they agreed, we set up a 30-minute phone call meeting to present the project and their role as a KU. Both the larger study and this thesis study were explained and at the end of the call, I asked the KUs if they were interested in reviewing the interview guide and participating in the recruitment.
Review of interview guide and participants for recruitment	All of the KUs reviewed the interview guide and they provided the following feedback via email: • Add a question about availability of guidelines or timetables set up before the implementation of the role (KU#3) • Suggested to embed patient experience from the providers (KU#2) • Suggested to recruit personal support workers (KU#2).
Review of preliminary results	A table with the preliminary results and the framework was sent to the KUs via email for review. KU feedback was provided via a phone call that lasted an hour. During this meeting, the researcher explained how the framework was used to analyze the results. The KUs were able to relate to the results from their own experiences as NPs as MRPs.
Review of the discussion chapter	A summary of the discussion chapter was sent to the KUs. Each KU and I met via a videoconference or telephone meeting, which lasted for one to one-and-a-half hours. Dissemination opportunities were also discussed.

4.4 Sample

Given that this study was a secondary data analysis, convenience sampling was used. Convenience sampling, also known as non-accidental sampling, is a nonprobability sampling method that consists of choosing members of the target population that meet specific inclusion criteria and that are accessible at a given time and place (Fortin & Gagnon, 2016). For the purpose of this study, stakeholders who were involved with the implementation of the NP as MRP model of care, that may have affected the NP's integration on the team, or had worked with this model of care were included. The stakeholder groups included: 1) healthcare professionals

from the interdisciplinary team, and 2) members of the hospital's leadership. The "Conceptual framework of acute care nurse practitioner role enactment, boundary work, and perceptions of team effectiveness" (Kilpatrick et al., 2013), was used to identify participant interviews from the larger study to be included in this study.

The sample from the larger study included members of the interdisciplinary team who were involved or worked with the NP as MRP model of care and members of the hospital leadership team that were involved with integrating the model of care. These inclusion criteria met the ones for this secondary analysis. For this reason, all interviews done in the context of the larger study were included in the secondary data analysis. The interviews that were included were from the following participant groups: 1) Healthcare professionals from the interdisciplinary team (N=3); 2) Physicians (N=4); and 3) Leadership (N=2). A total of nine interviews were completed for the larger study.

4.5 Recruitment

Given that this study was a secondary analysis of a larger study, no participant recruitment was necessary. Please see the section above on the recruitment strategies used in the larger study.

4.6 Data Collection

Since the larger study had a small sample size and all of the interviewed individuals in the larger study met the inclusion criteria for the secondary analysis, all nine interviews were used for the secondary analysis.

4.7 Data Analysis

Framework analysis was used to analyze the data for the secondary analysis. Framework analysis is a newer approach for qualitative data analysis that was developed in the 1980s in the

field of policy research to better meet the specific aims of applied policy research (Parkinson et al., 2016; Ritchie & Spencer, 1994). Framework analysis also allows for a systematic analysis of qualitative data to meet the demands and constraints of applied policy research (Ritchie & Spencer, 1994). It has been increasingly used in healthcare research in many disciplines (Parkinson et al., 2016). The purpose of framework analysis is to develop a set of codes identified from recurrent themes to sort and manage the data (Gale et al., 2013). From the themes and codes, a new structure is created (i.e., framework) where the data can be systematically organized and summarized (Gale et al., 2013). Framework analysis provides a systematic and structured approach to qualitative research (Gale et al., 2013; Ritchie & Spencer, 1994). According to Ritchie and Spencer (1994) this process involves: "sifting, charting and sorting material according to key issues and themes" (p. 177). The key issues and themes are identified by the researcher according to priori issues and the research question (Gale et al., 2013). Framework analysis is a flexible tool that can be used for different qualitative approaches for generating themes, and it is most commonly used for the thematic analysis of semi-structured interviews (Gale et al., 2013). In addition, framework analysis can be useful for other types of textual data, such as field notes and observations, diaries, and meeting minutes (Gale et al., 2013; Pope et al., 2000). It does not align with a specific theory, epistemology, or philosophy, which makes it adaptable for use with a post-positivism lens. Moreover, it can be applied inductively or deductively (Gale et al., 2013). Framework analysis can address a variety of study objectives, including contextual, diagnostic, evaluative, and strategic (Ritchie & Spencer, 1994). Ritchie and Spencer (1994) describe these research categories as follows:

- Contextual: "Identifying the form and nature of what exists" (p. 174)
- Diagnostic: "Examining the reasons for, or causes of, what exists" (p. 174)
- Evaluative: "Appraising the effectiveness of what exists" (p. 174)

- Strategic: “Identifying new theories, policies, plans or actions” (p. 174)

The objectives of this study are aligned with the diagnostic type of studies, because the aim is to examine the facilitators and barriers to the integration of the NP as MRP model of care.

Framework analysis was chosen for many reasons. It allows for a systematic classification of the data and transparency of every step taken by providing a clear analysis structure (Ritchie & Spencer, 1994). Furthermore, it is a dynamic process that goes back and forth between interviews to allow comparisons and associations to be made between datasets. As more datasets are analyzed, researchers may also want to make changes to those that have already been completed. This feature is possible with framework analysis. Finally, this approach fits well with the research question and objectives that are geared towards obtaining precise, factual, and descriptive answers. The specific pre-defined areas based on the chosen conceptual framework can therefore be explored while simultaneously uncovering unexpected areas (Parkinson et al., 2016).

Framework analysis is comprised of five key stages: i) familiarization, ii) identifying a thematic framework, iii) indexing, iv) charting, and v) mapping and interpretation (Ritchie & Spencer, 1994). The following section will explain each stage of the framework analysis, according to Ritchie and Spencer (1994).

4.7.1 Familiarization

In the first stage, the researcher must become familiar with the data by listening to the recordings, reading the transcribed interviews, and studying the observational notes. The goal of this stage is to take notes of recurring themes, issues, and key ideas. In the case of an extensive amount of collected data, the data for analysis can be chosen at this stage. For the purpose of this study, the entire dataset was analyzed.

4.7.2 Identifying a Thematic Framework

The researchers analyze the notes taken from stage one to identify key issues, concepts, and themes through which the data is examined. The thematic framework is then set up. The identified themes are placed in a matrix that is used to sift and sort the data. The construction of this framework is based on priori issues informed by the study aims, emergent issues raised from respondents, and recurrent analytical themes. In an inductive approach, the framework is constructed by the researchers as they examine the data, which is also known as open coding. At the beginning, the thematic framework is heavily rooted in the priori issues that stem from the research aim and question. As data sets are analyzed, the thematic framework is refined to better reflect the emergent and analytical themes. In deductive approaches, the codes/themes to be used are already pre-defined by an existing theory, literature, or specifics of the research questions (Gale et al., 2013).

This study used a deductive approach as the chosen conceptual framework (Kilpatrick et al., 2013) was used for the analysis. The data from the interviews was sorted and sifted in accordance with the concepts identified in the conceptual framework. When using a deductive approach, open coding is also recommended (Gale et al., 2013), which ensures that no emerging themes are missed. In this study, open coding was conducted in parallel to capture themes and concepts that were not mentioned in the conceptual framework. Concepts that were identified in the data during the first and second stage that were not portrayed in the conceptual framework, were used to index and chart the data.

4.7.3 Indexing

In this stage, the textual data was read and annotated according to the themes and key terms in the thematic framework. This stage is similar to coding in other types of qualitative data

analysis (Mcmillen, 2008). In this study, different colored pens were used to represent the five healthcare system levels, the three process dimensions, and the outcomes listed in the framework. Recurring concepts were highlighted and then indexed according to the color codes.

4.7.4 Charting

In this stage, the indexed data was lifted from the transcripts and placed into charts that were constructed according to the thematic framework. Each theme and subtheme were laid out in the charts as headings and subheadings. Charting can be done by case (i.e., dataset) or by theme. In this study, both options were used. The respondents' answers were placed into the appropriate charts according to their index reference.

A Word document with ten charts was created for each participant. The charts were labelled as: Patient-level, NP-level, Team-level, Organizational-level, Healthcare system-level, NP Role Enactment, Boundary Work, Perceptions of Team Effectiveness, Outcomes, and Other. The charts included all of the concepts listed by framework and the additional concepts that were not part of the framework, but had been found to be relevant (see Appendix J for an example). The indexed data was then placed in the charts according to the identified concept. Data that illustrated a barrier was highlighted in red. The data that illustrated a facilitator was highlighted in blue. For example, if two sentences were highlighted and indexed as funding considerations in orange, which was the color code for the healthcare system-level, these two sentences were then copied into the healthcare system-level chart under the column of funding considerations.

4.7.5 Mapping and Interpretation

In this stage, the data was interpreted as a whole and the range and nature of the phenomena was mapped. By reviewing the charts and research notes, researchers were able to compare the respondents' perspectives, accounts, or experiences, and search for patterns and

associations between the datasets, and look for explanations. Concepts were defined by the associations, descriptions, and key dimensions in the data. In this study, each Word document that contained the charts was printed and laid out beside each other. Each concept in the framework was compared among the participants. For example, for the concept of coverage, I had all participants' Word documents open on the page that showcased this concept. I then read what each participant had said about the concept in order to compare the responses, search for patterns, and map the data. This process was done for each concept.

4.8 Rigor and Trustworthiness

Rigor was maintained throughout the entire research process. For Guba and Lincoln (1981), meeting the tests of rigor is: "a requisite for establishing trust in the outcomes of the inquiry" (p. 103). The authors proposed a set of criteria to ensure trustworthiness in qualitative research; specifically: credibility, transferability, dependability, and confirmability (Guba & Lincoln, 1989, 1994).

First, credibility, which is parallel to the truth value or internal validity in quantitative research, requires that the constructed reality of respondents is truthfully portrayed by the evaluator (Guba & Lincoln, 1989). In other words, the researcher must provide a faithful description or interpretation of the experience or phenomenon being studied (Sandelowski, 1986). This was adhered to with the audit trails for the codes and concepts in the data analysis. Categorization of the coding was also reviewed by the knowledge users to confirm that the categories properly represented the data.

Second, transferability requires the study and its findings to be applicable outside the studied context (Sandelowski, 1986). The criteria, which is parallel to generalizability (external validity) in quantitative research, is controversial since the goal of most qualitative research is not

to find the one truth that can be applied to various contexts (Tobin & Begley, 2004). Transferability in this study was considered by removing any of the hospital's specific policies from the findings without hampering the understanding of the context.

Third, dependability, which is the equivalent of reliability in quantitative research, ensures stability of the data over time (Guba & Lincoln, 1989). Unlike reliability, which ensures that the testing procedures will produce consistent results with little measurement error, dependability is achieved by documenting an audit trail of the data analysis, decisions being made, methods used, and the findings (Sandelowski, 1986; Tobin & Begley, 2004). The use of framework analysis in this study allowed for a systematic method to be used with an audit trail of the data analysis.

Fourth, confirmability, which is equivalent to objectivity in quantitative research, ensures that the data, interpretations, and outcomes of the inquiry reflect the data rather than the researcher's opinions (Guba & Lincoln, 1989). Confirmability was maintained in this study by engaging the knowledge users in the data analysis to prevent biases or subjective opinions being introduced from the researcher.

4.9 Ethical Considerations

Ethics approval for the larger study and the secondary data analysis were obtained from UOttawa and the hospital site (see Appendix K for REB approval). Written consent from the participants was obtained at the beginning of the interviews, which were recorded and then transcribed using a coding system to ensure confidentiality of the information. No names were used in the transcriptions. After the interviews, the recorder was locked in the researcher's office. Transcriptions of the interviews were only done in a private office in the days or weeks that

followed the interviews. The documents were encrypted to ensure confidentiality. The data will be kept for a period of 7 years and then it will be securely deleted according to UOttawa policy.

CHAPTER 5:

RESULTS

This chapter presents the results according to the structure, process, and outcome dimensions of the *Acute care nurse practitioner role enactment, boundary work, and perceptions of team effectiveness* framework (Kilpatrick et al., 2013). The framework identified the key structure and process dimensions that affect how NPs are introduced onto interdisciplinary teams, and the outcome indicators used by the team to evaluate their effectiveness. Five structure dimensions represent the different levels of the healthcare system: 1) patient-level, 2) NP-level, 3) team-level, 4) organizational-level, and 5) healthcare system-level. The central process dimensions of the healthcare team that may be affected by the introduction process of an NP include: 1) boundary work, 2) perceptions of team effectiveness, and 3) NP role enactment. The last part of the framework, the outcomes, represent the outcomes of care. The barriers and facilitators that were recurrent throughout the interviews are presented for each of these dimensions and are outlined in Table 5.1 The number in parenthesis in Table 5.1 is the number of participants who addressed the concepts during the interviews.

Given the small sample size and nature of the project, sociodemographic data was not reported to maintain participant confidentiality. A total of 9 members of the interdisciplinary team participated in this study: interdisciplinary team members (N=3), physicians (N=4), and nursing leadership (N=2).

Although Kilpatrick et al. (2013) used the term, acute care nurse practitioner (ACNP) in their framework, in this study, the term nurse practitioner (NP) has been used (as suggested by KU#2). KU#2 indicated that the designation ACNP no longer exists in Canada, except for in the province of Quebec that have cardiology and nephrology ACNPs (personal communication with

KU#2, May 22, 2020). This was also reported by the Canadian Association of Schools of Nursing (2012). NP licensing exams and designations are based on the population they serve, which is classified as adult, paediatrics, or primary healthcare (i.e., family/all ages) (Canadian Association of Schools of Nursing, 2012).

5.1 Structure Dimensions

Starting from the center of the framework (the patient-level), the structure dimensions illustrate the different levels in the healthcare system that affect how an NP is introduced onto an interdisciplinary team, with the last dimension being at the healthcare system-level.

5.1.1 Patient-Level

The patient-level represents the influence of the patient population on the integration of NPs onto healthcare teams, which includes the patient demographics and their illness characteristics. In this study, the dimension of patient-level was discussed by five participants. Two facilitators were identified at this level, including the demographic of the patient population, and their health and illness characteristics that fit within the NP's scope of practice. No barriers were identified.

5.1.1.1 Facilitators.

5.1.1.1.1 Demographics/Health Illness Characteristics. The NP as MRP model of care was implemented on a sub-acute care unit, which had a number of 'alternative level of care' (ALC) patients, and the patient population was predominantly geriatric. Although these patients are usually medically stable, they have complex care needs due to multiple co-morbidities and heavy social issues, such as poor social support and poverty. The participants reported that caring for this patient population can be time consuming since it involves a lot of social care: "*It's unbelievably; these cases are unbelievably time consuming. So, you're having to kind of like,*

even as the MRP, even writing letters, trying to advocate, you know… you're never going to get paid for that." (participant 9).

The participants discussed the challenges with the traditional hospitalist model of care, because it did not allow physicians to allocate sufficient time to care for this patient population. Physicians are often required to prioritize their time to care for the patients who have more acute medical needs; ALC patients are usually the last to be seen after a busy day:

> *They're [ALC patients] never my foremost priority because they are always competing with people who are much sicker and […] they're always competing with people who are under pressure to move them along in terms of getting them out of the hospital* (participant 5).

> *en premier on va souvent voir nos patients qui sont très malades le matin, les nouveaux patients, les patients qui vont partir à la maison. Puis à la fin de la journée, souvent on va voir les patients qui sont là depuis longtemps. Bien, s'il y a un patient qui est là depuis soixante jours, souvent, à la fin de la journée, j'ai une minute à lui passer. Alors je vais juste dire "Ok, tout va bien?'', "oui'', "on se revoit demain''. Ou des fois on n'a même pas le temps de voir ces patients-là. Alors, ce sont souvent des patients que tous les médecins finissent par négliger parce qu'on a tellement une grosse tâche de travail. […] ce sont les patients qu'on n'a pas le choix de finir par négliger, parce qu'il y a des patients qui sont plus malades* (participant 7).

The participants highlighted that the scope of practice of the NP fits well for this type of patient population: "*le volet nursing qui en gériatrie est très important. Toute l'approche du patient, l'approche holistique au patient est particulièrement importante en gériatrie et l'IP serait là toute la journée*" (participant 6).

The NP as MRP model of care provided ALC patients with care that was better suited for their needs as they now had a clinician who could dedicate all their clinical time for them: "*the*

most important part of this equation is the patient getting the best possible care and I believe they were getting better care" (participant 5).

In sum, at the patient-level, patients' demographics and illness characteristics facilitated the integration of the NP as MRP model of care. ALC patients are a predominantly geriatric patient population who are medically stable, but have complex medical and social care needs that can be addressed by an NP. The NP as MRP model of care allows for clinicians to focus all of their time on this patient population without competing priorities. The participants believed that patients may be "getting better care" with this model.

5.1.2 NP-Level

The second structure dimension level in this framework is the NP-level, which represents the personal attributes of the NP and their professional and educational experiences that may influence their integration onto the interdisciplinary team. Two facilitators were identified: the personal characteristics of the NP and the nature of their specialized education. No barriers were noted.

5.1.2.1 Facilitators.

5.1.2.1.1 Personal Characteristics. Three participants spoke about the NP's personal characteristics, such as their motivation and leadership in implementing the MRP model of care:

> *Je pense que [l'IP] a été un leader phénoménal dans ce projet. [L'IP] était très à l'affut de ces normes, très connaissant(e) des limitations de ce qui pouvait être permis […] [l'IP] a été vraiment un(e) champion(ne) à tracer le chemin de ce qu'[il/elle] avait de besoin pour mettre ceci en place.* (participant 1).

In addition, the participants highlighted that the NP's interest and desire to take on the role of the MRP, particularly with this sub-acute patient population, were facilitators for moving this model of care forward:

> *I [physician] do enjoy the work of unfrailing the elderly, and optimizing theirs meds and optimizing their mobility, that's actually something I enjoy doing… but it is sometimes hard to find the time to do that in an optimal day. But [the NP] really enjoys that so in a way they [patients] were getting better care, they [patients] had somebody who was super enthusiastic about exactly what they needed.* (participant 5).

5.1.2.1.2 Education. Another participant mentioned how the NP's specialized education in the adult NP master's program provided them with the advanced knowledge and skills to care for this complex patient population:

> *l'IP avait une connaissance de base qui était générale et adulte. Donc, quelqu'un qui aurait fait ses connaissances de base pour la communauté, ça ne serait pas du tout pareille, parce que [l'IP] aurait appris pour de 0 bébé à plus loin, mais la tu as une connaissance qui est plus vaste, mais moins peut-être spécifique à des gens de maladies chroniques* (participant 4).

5.1.2.2 NP-Level Summary. In sum, at the NP-level, the NP's personal characteristics, including their motivation and leadership, as well as their education in the adult NP-program facilitated the integration of the NP as MRP model of care.

5.1.3 Team-Level

The team-level represents how the structure of the interdisciplinary team influences the integration of the NP within the hospital setting. Team structure is an important consideration when integrating an NP as the integration can restructure the team functioning and affect teamwork and team effectiveness (Kilpatrick et al., 2013). One facilitator and two barriers were discussed by the participants.

5.1.3.1 Facilitators.

5.1.3.1.1 Characteristics. The specific characteristics of the interdisciplinary team influenced the integration of the NP on the team. A specific team characteristic that facilitated the

integration of the NP as MRP model of care was the lack of the physicians' interest in wanting to take on the role of the MRP for the ALC patients or provide coverage during the physician MRP's absence. Prior to implementing the NP as MRP model of care on the unit, a physician had been providing continuous care to the patients. Nevertheless, the physician encountered difficulties in finding other physicians to cover during off times. Thus, the NP as MRP model of care was initiated in response to the identified need:

> *there would be conflict that would erupt over […] the covering physician wouldn't want to do this or do that and there was just no relief for him. […] you know nobody was stepping up to say "I'll do this with you or I'll help"* (participant 9).

5.1.3.2 Barriers.

5.1.3.2.1 Critical Mass. The concept of critical mass refers to the number of NPs needed to sustain a role or model of care. The lack of NPs was listed as one of the barriers to integrating the NP as MRP model of care by five of the participants. This concept is really about having a sufficient number of NPs in the role of MRP to create and sustain change within an institution. In this context, the NP was the only one practicing as the MRP in the hospital. Consequently, the NP did not have a network of colleagues in that role to obtain support: "*[The NP] felt super super super alone and more support would have been really nice*" (participant 9). Having more NPs in the role of the MRP would have had a more significant impact.

Furthermore, being the only NP as the MRP to pioneer this role in the hospital added pressure onto the NP to make it a success:

> *It would have been nice if there were two and three [NPs] in the hospital and [the NPs] could kind of form a group and talk and workout issues but no [The NP] was so alone (emphasizes so) and it's scary […] all [are] watching [The NP].* (participant 9).

Another aspect regarding the influence of critical mass on the integration of the NP as MRP model of care was the need for multiple NPs in the MRP role, which would ensure that they

could provide coverage for their own patients. Nevertheless, this was not an option. Critical mass was influenced by two factors: first, too few NPs were in the hospital with the necessary experience to undertake the MRP role; and second, the funding was lacking to hire multiple NPs in the MRP role: "*le nombre de IP qui est nécessaire. Nous, il fallait qu'on ait au moins 3 infirmières, non plus que ça des infirmières qui couvrent 24/7 pour assurer la relève. Puis le système de financement ne le permet pas*" (participant 2).

> *Alors si on regarde via les IP, ce n'est pas tout le monde qui a le même niveau d'expérience ou la même aisance à prendre charge pleinement d'un patient. Et aussi, en termes de qualité vie/travail, ce n'est pas tout le monde qui veut être sur appel. Donc, déjà que le bassin est petit, ça fait que la couverture devient encore plus limitée en termes de qui est prêt à le faire.* (participant 1).

5.1.3.2.2 Coverage. The concept of coverage includes all aspects to ensure the care by other clinicians for the NPs' patients during off hours, related to the critical mass barrier described above. The lack of coverage was the greatest barrier to the NP as MRP model of care discussed by eight participants.

At this hospital, hospitalists use a model of care where each physician covers their own patients for seven complete days, including overnight and weekends. Therefore, they are not accustomed to providing coverage for other physicians' patients. When the NP as MRP model was implemented, hospitalists had to take turns covering the NP's patients in the evenings, nights, and weekends according to a rotating schedule. As a result, they were required to cover a total of 26 patients rather than their own 20 during nights and weekends. This increased their workload, and some physicians reported feeling that the practice was unsafe. The physicians received no compensation while on-call and covering the NP's patients, even if they were called at night or during the week-end about one of the patients. They would, however, receive remuneration if they had to do an in-person assessment: "*ce n'était pas idéal parce que la charge*

de travail retournait sur le médecin, mais sans rémunération, parce que quand tu es de garde, tu n'es pas rémunéré, tu es rémunéré pour voir le patient" (participant 4).

Moreover, they did not feel comfortable covering patients with whom they were unfamiliar: "*It's about covering patients that you don't know, it's about large numbers of patients.*" (participant 5).

> *on déteste couvrir pour des patients qu'on ne connait pas. Alors, ce n'était pas à cause de l'infirmière praticienne. C'est juste un modèle, qu'à [cet l'hôpital], on n'aime pas. On préfère couvrir pour nos propres patients.* (participant 7).

Although the ALC patients were considered to be medically stable, a possibility always existed that they might receive a phone call while they were covering for the NP: "*c'est quand même des patients actifs qui sont supposés être stable, mais qui sont quand même actifs donc la couverture soir/ fin de semaine était une problématique*" (participant 4).

Another participant mentioned that they overlooked the need to have a written agreement concerning coverage: "*on n'avait pas nécessairement une entente écrite, signée par rapport à la couverture*" (participant 1). Leaders of the project and the physicians had only verbally agreed that they would be using a certain group of physicians to cover the NP. Nevertheless, when the time came to implement the model of care, some physician staff members had changed, and miscommunications occurred regarding the coverage agreement with the new members. Some physicians did not agree with the arrangement. The participant also mentioned that a written agreement about coverage would have given a reference point to what each party had agreed upon regarding coverage, and may have ensured a more solidified arrangement rather than relying on verbal discussions.

Another concern about coverage was the timing of patient hand-over. The NP had to provide the covering physician with patient report (i.e. hand-over) when the NP left for the night

or before the weekend, which was time-consuming for the physicians. Another concern about coverage was the different work schedules for the NP and the physicians, which caused difficulties with patient hand-over. Physicians were required to start covering the NP's patients an hour earlier than when they would normally start their work-week, which was challenging for some physicians:

> *mettons le vendredi nous on commence notre semaine à six heures du soir. Mais, dans le fond [l'IP] finissait à quatre heures du soir le vendredi. […] Bien en fait il fallait que [l'IP] demande au médecin qu'il commence à quatre heures du soir au lieu de six heures du soir. (participant 7).*

The NP as MRP model of care allowed physicians to focus their time on patients with greater acute needs since the ALC patients were removed from their workload: "*I appreciated having fewer ANS [ALC] patients*" (participant 5). Nevertheless, they were not compensated for covering the patients, making this trade-off not worthwhile for some physicians: "*that [caring for ALC patients] was a big burden so I mean there was something in it for them that was worthwhile; it just wasn't worthwhile enough*" (participant 9).

From the pharmacy's perspective, patient care was facilitated when the NP was on the unit as they were continuously available and easily accessible. Nevertheless, the NP was not continuously present on the unit, such as during the night and weekend shifts, which created challenges when medication orders needed to be clarified. For example, if a medication order was submitted to the pharmacy at 3:00 p.m., it was likely received by the pharmacist at around 5:00 p.m. Nevertheless, should the pharmacist require clarification about the medication order, it would not be possible to speak with the NP who would have finished their shift at 4:00 p.m.:

> *probably the pharmacist probably would have had the most issues, because you can write the order at 3pm and doesn't get down to the pharmacy until 5pm at which point [the NP*

> *is gone for the day]. And then they realize there's an issue and now what right. So now, do you call the physician who's on call.* (participant 9).

5.1.3.3. Team-Level Summary. In sum, at the team-level, the lack of the physicians' interest in providing care for ALC patients facilitated the integration of the NP as MRP model of care. Providing coverage for the NP during off-hours was the biggest barrier to the NP as MRP model of care. In addition, the lack of NPs in the MRP role at the hospital was another barrier to the integration of the model of care. The NP as MRP model provided benefits for physicians and to patient care when the NP was present on the unit. During the NP's off hours; however, the benefits became disadvantages as the absence of the NP caused problems that outweighed the benefits.

5.1.4 Organizational-Level

At the organizational-level four facilitators and four barriers were identified across several concepts of the Kilpatrick et al. (2013) framework. Moreover, from the data analysis, three new concepts were identified at this level that augmented the framework. The new concepts are: Technology, Workload, and Implementation Time.

5.1.4.1 Facilitators.

5.1.4.1.1 Role Formalization. The concept of role formalization involves all aspects surrounding the development and implementation of the model of care from an organizational perspective. These include, for example, how the role was formed, defined, and structured and the steps taken by the organization to put the model of care in place. This concept also encompassed important factors like the availability of technology and the length of implementation time, which can affect the integration of NPs on the team. This process may have a positive or negative impact on the integration of NPs on the interdisciplinary team. In this

study, some contradictions arose about whether or not the NP role was well defined. Four participants mentioned that the role was well defined: "*Je pense que oui, pour moi c'était clair c'était quoi son rôle, oui, pour moi c'était clair que c'était [l'IP] qui était la personne la plus responsible*" (participant 8).

Conversely, one participant reported that the role was not well defined or explained: "*il semblait avoir des duplications peut-être avec le médecin qui était en charge de l'unité*" (participant 3).

Most of the participants thought that the model of care was well planned and organized: "*Well, it was very well organized and thought out and it was super well planned. […] It wasn't just thrown together overnight, it was very well planned.*" (participant 5).

One participant mentioned feeling supported during the transition by having discussions about the new model of care with the NP and the nurse manager. Open communication about how the NP would act as the MRP was identified as an important facilitator for integrating this model of care:

> *Communication. […] moi je me souviens de m'avoir fait bien expliquer c'était quoi ce nouveau modèle-là et puis comment qu'on va procéder pour le futur avec ce modèle-là. Tu sais je pense que j'ai eu beaucoup de conversations avec [l'IP] pour voir comment qu'on allait travailler et puis donc pour moi le plus gros facilitateur c'était la communication puis la transparence* (participant 8).

The NP as MRP model of care was gradually implemented on the unit. A formal communication plan was elaborated for the implementation of the model of care. The project leads identified key actors to be notified of the change in practice including: physicians, nurses, physiotherapists, occupational therapists, social worker, pharmacist, laboratory personnel, and diagnostic imaging staff. The NP presented the model of care to these personnel and described the implications for their roles and practice. Furthermore, the NP's patient workload increased

gradually. The NP began with one patient and slowly added patients over the course of the implementation period. The NP had a strong understanding of the hospital bylaws and the legislation around NPs' scope of practice, which was necessary during the role formalization. This allowed the NP to proactively determine what was needed to support their practice:

> *there were a lot of meetings in advance, there was a lot of consulting, there was a lot of would this work, how would this work, what do you think of, could we do it this way, that kind of thing. There was a lot of checking in with the various players ahead of time. And also, they stepped it up gradually, […] It really gave everybody, including [the NP], time to adjust to this way of doing things.* (participant 5).

One of the administrative participants reported that the leadership team that implemented this model of care did not do enough publicity or speak sufficiently about the model of care. This lack of communication about the model of care was attributed to the many other projects the hospital was undertaking at the same time; therefore, they could not fully focus on this particular project: "*on n'a pas fait plus de publicité, […] à cause des autres priorités. Mais à le refaire, on fera plus*" (participant 2). Further publicizing the model of care may have further facilitated the NP's integration onto the team.

In addition, the implementation of the NP as MRP model coincided with important patient-care unit changes; the unit was undergoing a revision of its mission and vision at that time. This created an opportunity that facilitated the change in models of care to better serve the patient population: "*Donc, c'était déjà une vague de changement de focus pour cette unité-là, donc ça rentrait juste bien dans cette élan-là*" (participant 1).

5.1.4.1.2 Implementation Time. Within the concept of role formalization, the recurrent sub-concept, implementation time arose. This sub-concept, which is not part of the framework, refers to the length of time the NP model of care was in place, as it may influence the evaluation of the outcomes of the model of care. Although role formalization is a facilitator to the

integration of the NP as MRP model of care, the sub-concept, implementation time is a barrier. Two participants spoke about the short time that the NP as MRP model was implemented, which did not permit a full understanding of the effects of the new model. During the short time-frame, the NP did not get the opportunity to take on the expected full patient workload of ten patients; the NP cared for a total of five to six patients by the time the program was discontinued. Therefore, from the physicians' perspectives, being responsible for fewer than five or six patients did not make much difference to them. They may have noticed a larger impact on their decreased workload had the NP taken on the full ten patients:

> *en théorie, [l'IP] pourrait en avoir 10, alors tu sais on aurait eu plus d'avantages si [l'IP] aurait réussi à monter puis à prendre beaucoup plus de patients, mais je pense que là, ce n'était tellement pas beaucoup de patients que ça ne faisait pas une---il n'y avait pas de gros avantages comme moi comme médecin* (participant 7).

The physicians acknowledged the potential benefits of the model of care for them had it been implemented for a longer period with the NP caring for a full patient workload. Nevertheless, the NP as MRP model of care had more disadvantages than advantages for the physicians during its implementation: "*c'est un modèle qu'on acceptait parce qu'on pensait que c'étaient vraiment mieux pour les patients mais comme médecin c'est surtout que c'est surtout des inconvénients*" (participant 7). Given the short timeline, evaluating the long-term patient outcomes was difficult: "*C'est difficile de dire parce que ça n'a pas duré longtemps*" (participant 2).

5.1.4.1.3 Prescriptive Authority. The concept of prescriptive authority refers to the NP's authority to prescribe orders, such as medications, and laboratory and diagnostic tests. The NP was able to successfully exercise their prescription authority. Medical directives were created in collaboration with physicians to allow the NP to engage in acts they could not do independently

without a medical directive at the time, such as ordering certain diagnostic tests: "*il fallait écrire des directives médicales pour [l'IP], pour que [l'IP] puisse faire certains actes, certains prescriptions qui étaient appuyés par le corps medical*" (participant 1). The NP's ability to exercise the prescription authority, and the availability of medical directives, were facilitators for the integration of the NP as MRP model of care on the team.

5.1.4.1.4 Leadership. The concept of leadership represents the support provided by leaders such as nursing and physician leaders, and administrative personnel involved in the implementation of the NP as MRP model of care. The support can affect the integration of NPs on the interdisciplinary team. Leaders' support can include a strong belief in the model of care and various initiatives aimed at facilitating the integration of NPs onto the team. This concept was mentioned by five of the participants. Four spoke positively about leadership by identifying the key actors who supported and helped the implementation of this model of care. First, the presence of a physician leader who believed in NPs' roles in the healthcare system was one of the greatest facilitators for this model of care: "*So [name] who was like [NPs'] biggest cheerleader ever so this one physician who's always seen the value of what [NPs] have to contribute to the healthcare system and this particular patient population*" (participant 9). In addition, other physicians and nurse leaders within the organization supported the model, believing in the role of NPs in the hospital setting. Strong organizational and medical leadership, and a belief in the role, allowed the project to move forward:

> *On avait certains médecins on board qui appuyaient le projet et qui comprenaient le rôle des IP. Plus, l'infirmière chef qui croyait dans le rôle de l'IP. Donc c'est une combinaison. Puis le troisième, c'est trois facteurs, les médecins on board, deux l'infirmière chef (CNE) est on board.* (participant 2).

> *on avait un leadership qui croyait beaucoup dans la pratique infirmière et qui, je veux dire, qui ont ouvert les portes; ils ont facilité à faire avancer ce projet-là dans un très*

> *court lapse de temps entre le moment où on a eu le go de la haute direction puis la mise en place, on parle peut-être de six semaine, donc…l'appui du leadership est important… puis il y a certains médecins clés qui ont vraiment pu appuyer tout le développement des directives médicales en un temps record. Donc ça aussi ça l'a facilité.* (participant 1).

Nevertheless, a consensus was lacking about organizational leadership. Although most of the participants spoke about organizational leadership as a facilitator, one participant reported a lack of leadership and support from the medical side for pushing this model of care forward: "*Je ne suis pas convaincu que l'administration du côté médical était près d'aller aux murailles se battre pour ce modèle-là. Pas convaincu pantoute. Ni au niveau du département ni au niveau de médecin-chef*" (participant 6).

5.1.4.1.5 Technology. A new concept that emerged from the interviews was that of technology, which refers to how advances in technology in clinical settings can affect the integration of NPs on healthcare teams. In this study, two participants spoke about the role of an electronic medical record system for integrating the NP model of care on the team. Given that physicians have access to patients' medical records from home, they are able to view objective patient data and do not have to rely only on the nurse's report over the phone when being called. For physicians, having access to patients' medical records from home facilitated the provision of coverage for the NP's patients:

> *mettons que l'IP ne me donnerait pas de hand-over, je suis capable de la maison d'aller sur l'ordinateur de [l'hôpital], puis je suis capable de voir les ECG, les radiographies, les laboratoires, les signes vitaux, les médicaments, les notes de la journée de l'IP puis l'IP à chaque jour [l'IP] a des bonnes notes* (participant 7).

5.1.4.2 Barriers.

5.1.4.2.1 Common Understanding. The concept of common understanding refers to the stakeholders' comprehension of the model of care, its aims, and the role of the NP as the MRP.

Having a common understanding of these elements can facilitate the integration of the NP. In this study, some participants mentioned the physicians' lack of understanding of the NP role, which made some physicians uncomfortable about covering the NP's patients: "*c'est lack au niveau médical de la compréhension du rôle de l'IP*" (participant 2). The lack of understanding on the part of the physicians was a barrier to the integration of the NP as MRP model of care on the team: "*Il avait probablement une crainte que l'IP n'était pas en mesure de faire aussi bien et que là il aurait des problèmes qui là tomberaient sur les épaules des médecins de l'unité, surtout lorsqu'ils étaient de garde*" (participant 6).

In addition, two of the participants spoke about the resistance to change. Change can be difficult, especially in a busy hospital setting where people are accustomed to doing things in a certain way. This created a barrier to the integration of a new and innovative model of care:

> *It [NP as MRP model of care] is innovative, it is different, it is disruptive, I think that's the key word, it's very disruptive to the status quo. And that's a problem because you don't (sighs)… you know this could land anywhere like maybe this takes off, maybe it gets replicated, maybe it gets refined, maybe it changes the way people are compensated* (participant 9).

> *je vais juste revenir à la résistance au changement. On travaille dans un milieu où on a tellement de demandes puis même si c'est un changement mineur, même si c'est probablement un changement positif ou quoi que ce soit, des fois c'est difficile pour n'importe qui de changer cette division-là puis de changer un petit peu comment qu'on travaille.* (participant 8).

One participant reported that the NP as MRP model of care may have been a threat to the medical monopoly since it explores new and innovative ways of providing care that do not fit with the status quo:

> *I do wonder to what extent this is an existential threat to their monopoly and I mean you know you kind of sense, like you have to wonder like you know if we start letting NPs in*

> *and they start doing a good job and somebody runs the numbers what does this mean for me. I mean there has to be some of them who were mentally going down that road.* (participant 9).

One participant reported that despite the tensions and disagreements, a common understanding and goal existed with this model of care, which was to provide better care to ALC patients: "*il y a quand même un désir d'avoir une bonne collaboration, puis il y a quand même le désir d'offrir des bons soins aux patients*" (participant 1).

5.1.4.2.2 Workload. This new concept represents the increased workload associated with the NP as the MRP role, which can influence the sustainability of this model. As the hospital did not have the resources to replace the NP while moving into the MRP role, the NP was required to also continue in their previous NP role. This created a heavy workload for the NP, which was mentioned as a barrier to sustaining their new role as the MRP:

> *the other problem was that [the NP] was still doing my rehab role so [the NP] was like skipping [they're] lunch breaks, staying in late when [they] could, coming in early when [they] could, usually coming in on weekends when [they] could* (participant 9).

5.1.4.3 Organizational-Level Summary. In sum, at the organizational-level of the framework, facilitators arose under the concepts of leadership, role formalization, and prescriptive authority. Strong organizational and medical leadership facilitated the integration of the model of care, as did the NP's ability to autonomously enact their prescriptive authority and use specially prepared medical directives. Divergent opinions arose regarding the presence and lack of medical support for the model of care. Furthermore, a role formalization plan and sufficient discussions with key stakeholders were reported to be important facilitators for implementing the model. Although seven participants in this study reported having a strong formalization plan, one participant mentioned that the NP as MRP model was not discussed enough with the stakeholders, nor was it sufficiently publicized throughout the hospital. Finally,

at this level, three new concepts that were not part of the conceptual framework arose from the results, namely: technology, implementation time, and workload.

5.1.5 Healthcare System-Level

The final level of the structure dimension, the healthcare system-level, highlights how different concepts in the healthcare system influence the integration of a NP on the team. In this study, no facilitators emerged, though six barriers were identified. This level had the greatest amount of discussion in most of the interviews. One new concept related to the healthcare system that was not part of the original framework was brought up by a participant; this additional concept is labelled breadth of system implementation.

5.1.5.1 Barriers.

5.1.5.1.1 Legislation. This concept concerns the legal considerations for implementing NPs. Although the laws and regulations around NPs were not mentioned during the interviews, three of the participants discussed liability concerns regarding NPs. Two of participants, who were physicians, spoke about the medical-legal risks involved. Some of the physicians felt they were being put at risk when covering for patients they did not know or when they were taking on extra patient workload. In addition, the physicians did not have the same level of understanding about medical-legal responsibilities, in comparison to the NP. The physicians were concerned that they could identify an error made by the NP, and it would be their responsibility to correct it. This concern over responsibility made some physicians resistant about providing coverage for patients under the NP's care, thus creating a barrier to integrating the NP as MRP model of care:

> *I think some people were a bit leery of like "oh, all of a sudden, I'm caring you know 5 or 8 more patients and that is dangerous" so if they had 21 patients and suddenly they were responsible for 29, that made them nervous and to be fair, 29 is a dangerous number of patients to carry, but for me I felt like I wasn't caring 29 patients, it felt like I was caring*

> *21 covering 8 and it didn't honestly feel like such a big deal to me. But medically, legally, I was responsible for the 8 and I guess it just really comes down to people's comfort levels.* (participant 5).

> *Puis là médicolégallement, tu as toute cette affaire-là comme j'avais dit auparavant, c'est une perception. Les médecins je pense, c'est peut-être encore le cas, les médecins ne voyaient pas que [l'IP] avait un bon concept de responsabilité professionnel et que [l'IP] était couvert légalement dans leur rôle, comme nous autres.* (participant 6).

One participant reported that the healthcare system does not support NPs' practice. All documents addressed to MRPs are still predominantly physician-focused, even though NPs can complete the forms. This causes a barrier to NPs' autonomous practice:

> *a lot of it is our healthcare system doesn't support it, […] our healthcare system is to invested in status quo. […] Like every time I find a form it doesn't say provider it just says [physician], it says physician or nurse you have to take it to the committee and ask can you please change this to nurse practitioner?* (participant 9).

5.1.5.1.2 Funding Considerations. The concept of funding considerations refers to all elements related to funding, including funding, financing, and remuneration that can influence the integration and sustainability of the NP on the interdisciplinary team. Funding considerations and coverage were the most often recurring concept in the interviews; it was one of the greatest barriers. Seven of the participants discussed it in different ways. The participants highlighted that the difference in remuneration methods for physicians and NPs caused many challenges. Physicians are mostly compensated through billing the provincial government (in Ontario, the Ontario Health Insurance Plan, OHIP) with a top-up scheme provided by the hospital (i.e., fee-for-service model); whereas NPs are salaried by the hospital. Therefore, hospitals have to account for NP salaries in their yearly budget, which are a costly expense, but not physicians: "*Nous maintenant j'entends dans les corridors, pourquoi on doit garder des IPs. Ce que j'entends dans les conversations, ça nous coûte cher pour aider les médecins*" (participant 2).

Consequently, the participants explained the disincentives that exist for hospitals to hire NPs, which can make it impossible to employ enough NPs to provide coverage for each other's patients. This could solve the issue of the physicians' coverage: "*Alors que d'ajouter une IP et de remplacer un médecin qui ne coute rien, c'est une pénalité financière pour l'hôpital et ça c'était l'autre problème qu'on rencontrait*." (participant 6).

Nevertheless, one of the participants explained that funding allocated to healthcare ultimately comes from the same budget; it is just not distributed in the same way: "*ce n'est pas la même enveloppe, ce n'est pas la même poche qui paye les IP et les médecins*" (participant 2).

Another participant mentioned that the current provincial funding model is not conducive to interdisciplinary collaboration since it favors one group (the physicians) and penalizes the other group (the NPs): "*le modèle de financement au niveau provincial ne facilite pas ce genre de collaboration multidisciplinaire*" (participant 1).

> *this is pure regulatory capture what physicians have, this is pure regulatory capture. It is so disincentivized, […] You know there is no competition, there is no free market, there is pure regulatory capture and [the NP] can't, [the NP] can't compete against free labor… [the NP] can't and that's what it is, that's what it is in the eyes of the hospital, it is free labor, what a physician is.* (participant 9).

For this participant, the concept of "regulatory capture" was used as an economic term in the context of the structure and regulation around physicians' remuneration model. The participant explained that the model is set up in a way that creates financial advantages for hospitals to employ physicians rather than NPs. This concept could also fit into the legislation concept of the framework as it pertains to how regulation is structured to regulate funding models.

Although funding considerations was mostly reported as a barrier to the NP as MRP model of care, a financial incentive exists for physicians to have someone else provide care to

ALC patients. Some physicians discussed the small financial compensation they receive through OHIP when caring for ALC patients, who were often hospitalized for several weeks. After 30 days, physicians can only bill OHIP for an ALC patient once a week. This creates a financial disadvantage for physicians to care for these patients:

> *somebody whose pay was not affected by the fact that they have been in hospital for like maybe 100 days or more. It is hard to… justify spending a good part of the day for somebody whom you know you're not going to get paid a cent.* (participant 5).

In addition, the fee-for-service payment model is less advantageous when caring for ALC patients. One participant reported that it was better for a clinician, such as a NP, who is on a different pay-scale to care for this patient population. Since NPs are compensated by the hour, they are financially able to dedicate more time to each patient; whereas physicians' salaries depend on the number of patients they see. Furthermore, two physician participants, who provided coverage for the NP, reported that it did not bother them from a financial perspective, to no longer have these patients under their care as they were not compensated much for providing care to them: "*So, essentially, it is beneficial to have somebody who is on a different pay schedule. It's beneficial for the patient and we don't actually loose very much because we're not getting paid very much for those patients anyway*" (participant 5). Therefore, some physicians did not feel financially threatened by this model of care, which may have contributed to their acceptance of the NP as MRP model. In any case, some conflicting views were expressed about the financial impact for physicians, as explained in the following paragraphs.

From another perspective, some of the participants mentioned the financial loss caused by the NP, because they were caring for patients who otherwise might have been cared for by the physicians: "*I suspect some of this was about money, I remember (Dr. NAME) saying off-hand you know: "when [NPs] take these patients, [they] cost us money*" (participant 9).

> *Je pense qu'il avait un peu de turf protection au niveau des médecins, il avait la perception qu'il aurait une perte de revenu si l'IP fait des choses puis moi je n'en fais pas, je ne suis pas facturé, puis c'est vrai* (participant 6).

5.1.5.1.3 Unionization. The concept of unionization refers to the influence of union rules on the integration of NPs onto interdisciplinary teams. The unionization of NPs was identified as a barrier and the concept was discussed by four of the participants, three of whom were physicians. Unions rules deal with compensation and work scheduling, which creates challenges when the NP is on-call or needs to go to the hospital to provide care to patients during the night or on weekends. The physicians seemed to view unionization as a restriction of the NP's ability to work longer hours, or provide overnight and weekend coverage: "*C'est souvent la disponibilité des IPs dans le sens qu'eux, ils ont des conventions collectives, puis c'est du 8 à 4. Malheureusement en médecine, ce n'est pas du 8 à 4*" (participant 4). The union rules would require hospitals to hire a greater number of NPs to cover each other, which would lead to further hospital expenditures:

> *le problème de [l'IP] c'est juste que [l'IP] est syndiqué. Fait que [l'IP] ne peut pas faire vingt-quatre heures sur vingt-quatre pendant sept jours. [L'IP] n'a pas le droit, [l'IP] n'a pas le droit de travailler vingt-quatre heures, comme il n'y a personne qui la laisserait faire. Fait que je pense que, ce n'est pas le fait que [l'IP] soit un [IP], mais c'est le fait que les [IPs] soient syndiqués puis qui n'ont pas le droit de travailler comme nous [les médecins]* (participant 7).

5.1.5.1.4 Breadth of the System Implementation. Finally, the concept of breadth of system implementation is a new concept from this study. Breadth of system implementation refers to the degree to which the NP as the MRP role is being enacted, publicized, funded, and administratively supported at a provincial level. The lack of NP as the MRP role enactment and the scant publicity of the role in the province was discussed by one of the participants. Few

hospitals in Ontario have implemented the NP as the MRP role: "*other than [NP as MRP] and [NP as MRP], there was literally nobody else in the province, in the country that I knew of who was doing this*" (participant 9).

With few examples to guide or inform how this model of care should be implemented, difficulties can easily arise. Although the role of NP as the MRP has been present in Ontario for over eight years, one participant highlighted that the model of care is not being sufficiently presented in health professional education or discussed within healthcare settings, which makes it difficult to implement: "*We're not teaching people, we're not modeling it were not succession planning, we're not, we're not pursuing this avenue*." (participant 9).

5.1.5.2 Healthcare System-Level Summary. In sum, at the healthcare system-level in the framework, no facilitators were identified. The concept of legislation was noted as a barrier for two reasons. First, the perceived medical-legal risk to which physicians were exposing themselves by covering the NP's patients and undertaking an extra workload made some physicians uncomfortable about providing coverage for the NP's patients. While this is more relevant to liability rather than legislation, liability was not included in the Kilpatrick et al. (2013) framework. Second, existing legislation does not fully support the NPs' independent practice, making it difficult for them to exercise their role autonomously.

The concept of funding considerations was the most often mentioned through most of the interviews. The multiple issues around funding considerations include elements related to funding, financing, and remuneration, which created immense barriers for the NP to integrate onto the interdisciplinary team. The main issue was the incompatible compensation models for the physicians and NPs, which make it more favorable for hospitals to hire physicians. Furthermore, the divergent opinions regarding the physicians' perceived loss of revenue due to the absence of compensation when providing coverage for the NP's patients, and not having the

ALC patients under their care, were mentioned throughout the interviews. While some physicians did not perceive this to be a loss in revenue since they would not have been compensated more anyways, it remained as an important issue for others.

The concept of unionization was also perceived as a barrier to the NP as MRP model of care by the participants, especially the physicians. According to the participants, union rules make it difficult and costlier for hospitals for NPs to work in the same way as physicians do, which created a disincentive for hiring NPs, from a hospital administrative perspective. Finally, a new concept emerged that was related to the healthcare system-level but had not previously been part of the framework, namely: breadth of system implementation.

5.2 Central Process Dimensions

The framework contained three central process dimensions: boundary work, perceptions of team effectiveness, and NP role enactment. These dimensions are comprised of processes in the team that can be affected by the integration of an NP. They can also be affected by the several levels of the structure dimensions presented above. The results in terms of the central process dimensions are presented below.

5.2.1 Boundary Work

Boundary work is one of the central process dimensions of the conceptual framework. This dimension reflects the shifting roles and accommodations in the healthcare team that occur when a new role is introduced (Kilpatrick et al., 2012a). As NPs have roles that fit within both medicine and nursing, their introduction onto an interdisciplinary team can impact the traditional boundaries between the professions, and with the other healthcare professions. Among the concepts in this dimension, three were identified as facilitators and no barriers were noted.

5.2.1.1 Facilitators.

5.2.1.1.1 Trust. The concept of trust, which refers to the development of a relationship of trust with the NP, was mentioned by six of the participants. Physicians and the interdisciplinary team felt comfortable with the NP taking on the role as MRP as this particular NP had worked on the unit for many years, was well known by the team members, and had demonstrated knowledge and skills over time: "*I know the NP quite well and I have a pretty high degree of trust in the care that [he/she] provides so I was very sure that [his/her] patients were well taken care of*" (participant 5).

Knowing and trusting the NP facilitated the integration of this model of care: "*ça l'a facilité c'est certain qu'on la connaissait déjà, je ne pense pas qu'on aurait accepté le projet avec une IP qu'on ne connaissait pas, honnêtement*" (participant 7).

On the other hand, some participants mentioned a lack of trust on the part of physicians, with regards to NPs: "*les médecins hospitalistes ne se sentaient pas confortable d'être responsable d'un patient sous la responsabilité de la IP*" (participant 2). The lack of trust created a barrier and it was a source of discomfort for the physicians who were needed to provide coverage for the NP's patients; the trust needed to be built:

> *pour certains [médecins] il y a peut-être eu un inconfort où il fallait développer un lien de confiance…le médecin fallait qu'il ait confiance que l'IP a pris les bonnes décisions, a un bon plan de soins en place pour que si quelque chose arrive durant la nuit il n'ait pas à tout corriger peut-être toutes les décisions que l'IP aurait prises* (participant 1).

For the participants, the concept of trusting the NP was important; to gain this trust, the NP had to demonstrate that they had the knowledge and skills to undertake the role of MRP. The establishment of trust was facilitated in this case, because the NP had been working on the unit for a number of years and was well known by the interdisciplinary team. Many of the participants

acknowledged that if the NP as the MRP had been unfamiliar to them, they would not have approved the project. Generally, physicians are assumed to be competent, whereas the NP has to prove their competencies: "*you can't take it for granted that you have those skills, and knowledge and so forth whereas you just assume that a physician is competent*" (participant 9).

5.2.1.1.2 Time. Two participants discussed the concept of time, which represents the passage of time that it takes for the interdisciplinary team to accommodate the NP's role on the team (Kilpatrick et al., 2012). According to Kilpatrick et al.'s (2012) definitions, the longer the team members are exposed to NPs and work with NPs, the better they understand the role and accept it. This was not the first NP to work on the unit, and therefore, the interdisciplinary team members were already familiar with the role of NPs, which made it easier to integrate the role onto the team: "*ce n'était pas la première qu' [un(e) IP] était en réadaptation puis réadaptation puis [unité X] sont très près donc [le role] était connue*" (participant 4).

5.2.1.1.3 Interpersonal Dynamics. The concept of interpersonal dynamics represents the NP's behaviors that facilitate boundary work. In this study, most of the participants denied tensions with the role of the NP, other than those related to coverage and pharmacy: "*Je ne pense pas que ça [NP as MRP model of care] l'a causé des tensions, je pense que l'harmonie au niveau des infirmières et de l'IP c'était correct, il n'y avait pas problème. Ils savent que l'IP a plus de connaissances*" (participant 4).

The role seemed to be well accepted by most team members:

> *il y avait beaucoup d'ouverture que ce soit l'équipe multidisciplinaire infirmières, physio, ergo, travailleuse sociale, ça il y avait une très très grande ouverture, même là aussi la présence que quelqu'un de constant allait offrir puis qu'il allait passer la matinée sur le département, donc c'est une certaine disponibilité qui s'acquiert* (participant 1).

Many of the participants stated that they enjoyed working with the NP for various reasons. The NP's unique vision and innovative ideas fostered learning avenues for the entire team and led to great team work: "*j'apprécie beaucoup travailler avec [l'IP] parce que je trouve aussi que [l'IP] a une vision qui est un peu différente de la mienne sur les choses et je pense qu'on travaille bien en équipe*" (participant 3).

Some participants highlighted that the NP's continuous availability during the day to answer their questions or concerns, was appreciated by the team: "*[L'IP] était tout le temps disponible pour répondre aux questions et puis clarifier un peu c'est quoi son rôle si jamais il y avait besoin de clarification ou quoi que ce soit* " (participant 8).

On the other hand, one participant mentioned how the NP's lack of a regular presence on the unit hindered the acceptability of the role: "*je me dis si quelqu'un n'est pas la régulièrement, bien... On pense que peut-être que les gens vont peut-être moins être acceptables, accepter le nouveau rôle je devrais dire*" (participant 3).

Another participant highlighted the NP's great knowledge around the different roles of each of the interdisciplinary team members. The NP knew who to involve in each patient's care and valued each team member's input: "*[L'IP] connait beaucoup le rôle de chacun des professionnels alors [l'IP] venait nous chercher lorsque c'était le bon temps et puis vraiment [l'IP] valorisait notre input, nos recommandations et tout ça*" (participant 8). During weekly rounds, each team member had the opportunity to provide their feedback and recommendations on patient care treatment plans. The participants highlighted that the NP considered everyone's recommendations, and the team worked together to develop a care plan for each patient. The NP also fostered greater and more inclusive team work:

> *pendant les rounds, on s'assurait que tout le monde avait la place de communiquer ce qu'ils avaient à communiquer, de faire des recommandations. L'IP prenait ça en compte*

et puis on travaillait sur un plan commun alors pour moi, cette approche-là c'était vraiment bien. (participant 8).

5.2.2 Boundary Work Summary

In sum, the concepts of trust, time, and interpersonal dynamics from the central process dimension of boundary work were identified as facilitators. The interdisciplinary team members trusted the NP, given that the NP had been working on that unit for many years and was familiar with the team members. This was a great facilitator to the integration of the NP as MRP model of care. Divergent opinions were apparent from the leadership participants who reported a lack of trust in the NP on the part of physicians. Finally, in the last concept of this dimension, interpersonal dynamics, the NP's behaviors facilitated boundary work, and thus, the integration of the NP as MRP model of care. Although conflicting opinions were expressed by the participants from the interdisciplinary team with regards to the NP's availability on the unit, the NP's continuous presence during the work day and considerations for each interdisciplinary team members' role were appreciated by the team. This facilitated the integration of the NP as MRP model of care.

5.3 Outcomes

In the framework, outcomes represent care outcome indicators that help the team to evaluate their effectiveness after integrating an NP onto the team. In this study, no barriers or facilitators were identified for this concept and it was not within the scope of this project to measure the outcome indicators. Nonetheless, it remains relevant to highlight outcomes from this model of care as they may contribute to future improvements for the NP as MRP model of care. The interview data yielded a new concept that was discussed by participants, which also fit within the Outcomes part of the framework; the new concept was resources utilization. It was added to the framework as an outcome, and was not considered as a barrier or facilitator.

5.3.1 Resource Utilization

The analysis yielded a new concept, resource utilization, which refers to using healthcare professionals' full scope of practice to maximize healthcare human resources. Two of the participants discussed this concept. Having an NP care for ALC patients allowed the physicians to focus on caring for more acute patients, thus maximizing resource utilization:

> *les médecins, toutes leurs connaissances, leurs savoirs pourraient être utilisés de façon plus efficiente vers des cas qui sont médicalement beaucoup plus complexes, tandis que ces patients-là [ALC patients] étaient plus simple et peuvent très bien rentrer dans la définition du type de patient que l'IP peut prendre soins.* (participant 1).

The utilization of NPs in hospitals is not aimed at replacing physicians; it is about better utilizing each professional's scope of practice: "*mieux utiliser nos ressources puis mieux utiliser leur [les IPs] potentiel*" (participant 2).

The NP's scope of practice affects resource utilization in an institution. Three of the participants mentioned that the NP was not exercising their full scope of practice in their previous non-MRP role. These participants felt they could maximize the NP's scope of practice within the NP as MRP model of care: "*[L'IP] est assez compétent(e) pour gérer des patients puis c'est un peu dommage que [l'IP] ne puisse pas le faire, c'est ça, c'est dommage que [l'IP] ne puisse pas pratiquer à sa pleine connaissance*" (participant 7).

One of the drivers for implementing this model of care was to maximize the NP's role. Although the hospital has many NPs, they are not being used to their full potential: "*on les [des IP] a dans l'hôpital, je ne trouve pas qu'on les utilise assez bien dans leurs connaissances*" (participant 4).

The NP, on the other hand, felt they were practicing at their full scope of practice. Although their previous non-MRP role did not include admitting and discharging patients, or

holding the title of MRP, the NP practiced all of the controlled acts outlined by the College of Nursing of Ontario:

> *[The NP] is prescribing, [the NP] is doing advanced assessments, [l'IP] pose des diagnostics, [the NP] orders labs, [the NP] interprets labs and you know if one of the physicians is away for a day [the NP] will cover their patients, Well […] obviously other than not being an MRP, yeah. [the NP] shadows MRP right. That's what [the NP] does now so [the NP] rounds on patients, whatever, [the NP] will admit them, write up all their documents, [the NP] will talk to them, [the NP] will examine them, you know but at the end of the day officially they're not admitted to [the NP] so (…) I mean when you look at the scope of an NP in terms of controlled acts, yeah [the NP] is doing all the controlled acts.* (participant 9).

5.3.2 Outcomes Summary

Finally, a new concept that was not part of the framework emerged from the interviews; the concept was labelled resource utilization. The NP as MRP model of care allowed for a better utilization of healthcare human resources by maximizing each professional's scope of practice.

5.4 Summary of Findings

The results presented in this chapter demonstrate that integrating an NP as MRP model of care in a hospital setting requires a multi-faceted approach. Multiple key stakeholders from various levels in the healthcare system are involved in multiple issues, influencing consequences for both patients and team members.

From the data analysis, the concepts with the greatest amount of participant engagement were funding considerations and coverage. These were also the main barriers to the integration of the NP as MRP model of care. A number of other influential barriers were identified, such as the NP's unionization, insufficient critical mass of NPs, high NP workload, short implementation

time of the model of care, and a lack of common understanding about the NP role. The healthcare system-level was the level with the largest number of barriers.

Many facilitators were identified, including a strong organizational and medical leadership, a structured role formalization plan, the NP's leadership, personal attributes, and education, the ALC patient population, the establishment of a trusting relationship between the NP and team members, and advances in technology (i.e. access to an electronic medical record system).

Lastly, the results of this study identified 13 barriers and 11 facilitators from the conceptual framework. Although the number of barriers is closely balanced by the number of facilitators, the most influential concepts (i.e., funding considerations and coverage) are barriers. While many factors facilitate the integration of the NP as MRP model, the barriers clearly outweigh these factors. Certain powers within the healthcare system, such as funding, unionization, issues pertaining to coverage, and the lack of critical mass make it difficult for NPs to implement innovative models of care (like the NP as the MRP model). Finally, this analysis revealed three new barriers (breadth of system implementation, workload, and implementation time) and one new facilitator (technology).

Table 5.1 Facilitators and Barriers to the Integration of the NP as MRP

	Facilitators	Barriers
STRUCTURE		
1) patient-level	-Patient demographics (1) Geriatric population -Patient Health illness Characteristics (5) ALC patient population	-
2) NP-level	-Personal Characteristics (6) Leadership Motivation -Education (1)	-
3) team-level	-Characteristics (1) Lack of physician's interest and time for ALC patients	-Coverage (8) -Critical mass (5)
4) organizational-level	-Leadership (5) Nursing Medical -Role Formalization (7) Technology (2) -Prescriptive authority (2) Access to medical directives	-Common Understanding (6) -Lack of understanding of NPs' roles (3) -Resistance to change (2) -Implementation time (2) -Workload (2)
5) healthcare system-level	-	-Legislation/Liability -Lack of legislative support for NPs' practice (1) -Physician liability (3) -Funding considerations (7) -Incompatible remuneration models between MD and NP -Physicians' perceived loss of revenue -Lack of funding for NPs -Unionization/Employment standard regulations (5) -Breadth of system implementation (1)
PROCESS		
Boundary work	-Trust (7) -Time (2) -Interpersonal dynamics (5)	-

CHAPTER 6:

DISCUSSION

The purpose of this study was to explore the barriers and facilitators to the integration of the NP as MRP model of care within a hospital setting. The findings from this thesis study are relevant to all levels of the healthcare system, as described in the "Conceptual framework of acute care nurse practitioner role enactment, boundary, and perceptions of team effectiveness" by Kilpatrick et al. (2013). This framework identified key structural and process dimensions that affect how NPs are introduced onto interdisciplinary teams, and the outcome indicators used by the team to evaluate their effectiveness (Kilpatrick et al., 2013). Within the framework, five structure dimensions represent the different levels of the healthcare system: 1) patient-level, 2) NP-level, 3) team-level, 4) organizational-level, and 5) healthcare system-level. Three key dimensions are related to the central process dimensions of the healthcare team, which can be affected by the NP's introduction: 1) boundary work, 2) perceptions of team effectiveness, and 3) NP role enactment. The last part of the framework is comprised of the outcomes (i.e., the outcomes of care). These dimensions and outcomes of the framework were used in analyzing the data through a framework analysis approach.

The following sections discuss the findings in terms of answering the research question: What are the barriers and facilitators to the integration of the NP as MRP model of care as perceived by the healthcare team members involved in the model? First, a summary is presented of the barriers and facilitators and the new findings. The summary is followed by a discussion of the key points, including caring for ALC patients, trust, tensions within the results, coverage, and healthcare system challenges. The limitations of the framework and framework analysis are then

discussed. Implications for practice, policy, and research and the study's limitations are also described.

6.1 Summary of Findings

This section provides a summary of the facilitators and barriers at each level of the healthcare system, according to Kilpatrick et al.'s (2013) framework. A total of 13 barriers and 11 facilitators were identified. In addition, new findings that emerged from this study are presented. Table 5.1 shows a list of the facilitators and barriers and the Kilpatrick et al. (2013) framework with the new findings is presented in Fig. 6.1. The new findings are indicated in the blue boxes.

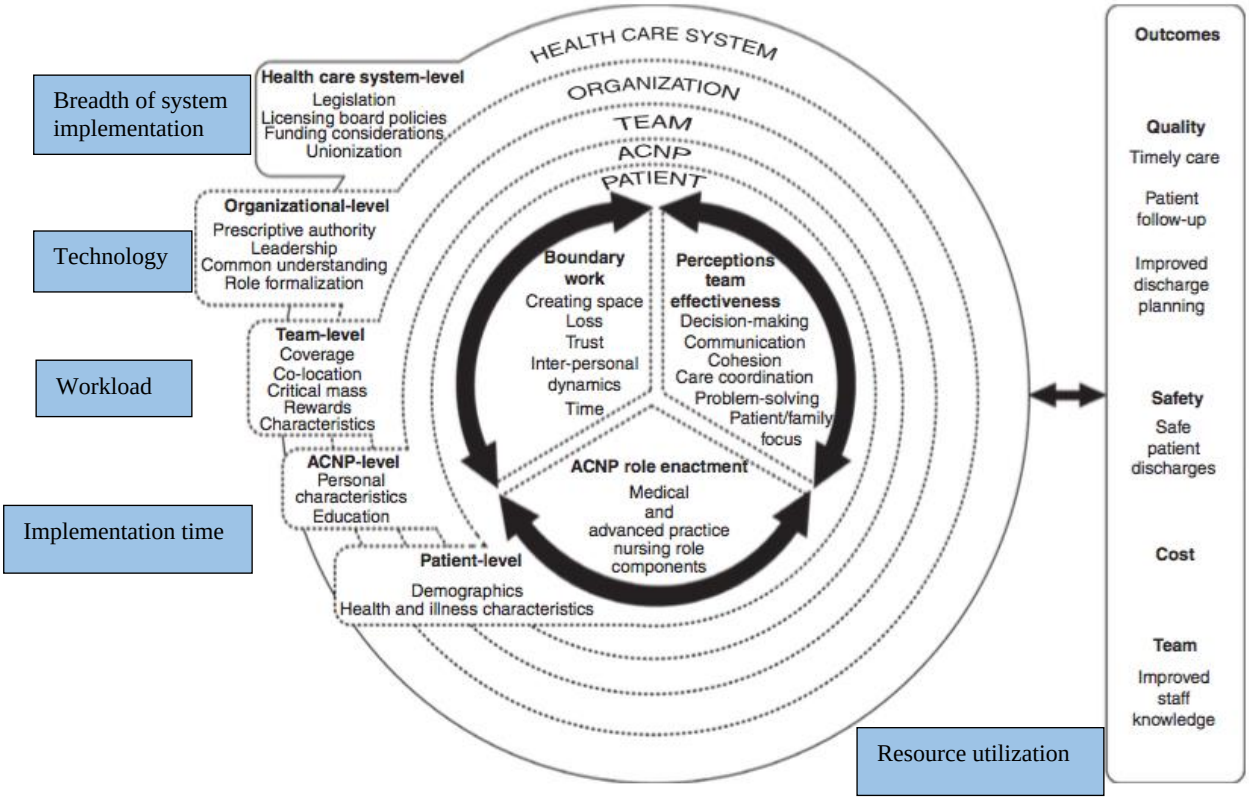

Fig. 6.1 Conceptual framework of acute care nurse practitioner role enactment, boundary work, and perceptions of team effectiveness with new concepts.

6.1.1 Facilitators

Facilitators were identified at four levels of the framework: the patient-level, NP-level, team-level, and organizational-level.

First, at the patient-level, NPs' scope of practice fits well with the care needs of the patient population given that the model of care was implemented on a unit with ALC patients. The NP was able to assume all of the care as the primary provider for these patients and address their physical and psychosocial needs. Furthermore, the participants reported that having the same provider ensured a constant treatment plan for patients and the interdisciplinary team. Also, when the NP was working, they were more available for patients and for the team.

At the NP-level, the NP's leadership and motivation, and their personal attributes and education were facilitators to the integration of this model of care.

At the organizational-level, the organizational, medical, and nursing leadership were influences that helped the gradual integration of this model of care. Furthermore, the development of medical directives allowed the NP to perform certain acts that NPs would not otherwise have executed at the time.

Within the central process dimensions, facilitators were seen in boundary work. The NP was trusted by peers as the NP had been working on that unit for many years and was well known by staff members.

6.1.2 Barriers

Many barriers were identified at three levels, including: team-level, organizational-level and healthcare system-level.

At the team-level, coverage and a lack of critical mass of NPs in the role of the MRP were identified as barriers. Coverage was the predominant barrier, and one of the main reasons for the

NP as MRP model of care being discontinued at this site. Next, the lack of a critical mass (an insufficient number of NPs as the MRP) prevented the sustainability of the role and adequate peer support.

At the organizational-level, the lack of the physicians' understanding of NPs' roles and legal responsibilities created a discomfort among the physicians for providing coverage for the NP's patients.

Next, at the healthcare system-level, funding was the most influential barrier for many reasons. First, the physicians were required to provide coverage for the NP's patients and take on an extra workload without compensation. The different remuneration models for physicians and NPs also created a disincentive for hospitals to employ NPs. Finally, for some physicians, the NP as MRP model of care was perceived as a financial loss. The discrepancies between NPs' and physicians' employment standards, and the NPs' unionization were identified as barriers to the integration of the NP as MRP model of care.

6.2 New Findings

The data analysis yielded new concepts that were not included in Kilpatrick et al.'s (2013) framework. Three new barriers (breadth of system implementation, workload, and implementation time) and a new facilitator (technology) emerged. In addition, a new outcome was identified and labelled as resource utilization. These concepts have been added to Kilpatrick et al.'s (2013) original framework (Fig. 6.1).

The concept of breadth of system implementation, a barrier, was associated with the healthcare system-level of Kilpatrick et al.'s (2013) framework as it pertains to factors in the macrosystem that can influence a NP's integration onto an interdisciplinary team. This concept involves the integration of the NP as MRP model of care at the provincial level. An important

consideration is whether or not a model of care is being enacted and publicized throughout the province. A broader system level implementation of a model of care could influence or encourage other institutions to implement it since it would provide them with models and experiences they can build upon.

The next barrier is the concept of workload, which refers to the NP's workload when integrating onto a new team or model of care. A high workload could hinder the sustainability of the role and impair the NP's successful integration onto the team. Therefore, the NP's workload should be considered when integrating a new NP or model of care. This concept was associated with the organizational-level in the framework since it is controlled by the institution that implements the new NP role.

Two new organizational-level concepts have been embedded in the role formalization concept of the framework, namely: technology and implementation time. The concept of technology refers to the advancement of technology in clinical settings (e.g., access to an electronic medical record) that could influence the integration of an NP onto the team. The presence of technological advancements could facilitate the changes and accommodations that would be needed by the team to integrate an NP. In this study, access to an electronic medical record (EMR) system allowed covering physicians to view the NP's patient charts from home, should they be called during the night or weekend. Next, the new concept of implementation time, which is the length of time a new NP role or model of care is in place, should be considered when integrating a new NP on the team. In this study, the NP as MRP model of care was implemented for a short period, which did not allow the NP to take on the expected number of patients, or permit an evaluation of the long-term patient and organizational outcomes of this model of care. As a result, the physicians' workload was little affected since they only had five or six fewer patients.

The final new concept that emerged from this study was resource utilization, which is embedded in the outcomes part of Kilpatrick et al.'s (2013) framework. Resource utilization refers to utilizing the healthcare professionals' full scope of practice to maximize healthcare human resources. The integration of an NP onto the team may allow for more optimized healthcare professionals' scopes of practice, and makes better use of healthcare human resources.

6.3 Interrelations between Concepts

In this study, coverage was the most discussed concept in the interviews. Other frequently discussed concepts included: critical mass, funding, employment standard/unionization, and critical mass. According to the framework, the relations among these concepts can influence the NP's role enactment and integration onto the team. The interrelations between the concepts was addressed by Kilpatrick et al.'s (2013) framework: "Structural and process dimensions and their related concepts work synergistically to affect ACNP role enactment, boundary work, and perceptions of team effectiveness" (p. 210). Table 6.1 shows the interrelations between concepts (i.e., how each concept affects the others).

Table 6.1 Interrelations between the concepts

Concept	Statement
Coverage	• Ensuring coverage was a great challenge for many reasons such as issues of **funding** and the lack of a **critical mass.**
Critical Mass	• Lack of critical mass affected the provision of **coverage**. Nevertheless, ensuring an adequate number of NPs to cover each other, while respecting **employment standards and union** regulations would increase hospital costs (**funding**).
Role Formalization	• While developing and implementing the NP as MRP model of care, a written agreement about providing **coverage** would be necessary.
Technology	• Technological advancements like electronic medical records facilitated the provision of **coverage** for physicians.
Workload	• The NP still had to do their work responsibilities from their previous role since the hospital did not have the resources (**critical mass** and **funding**) to replace the NP.
Legislation/Liability	• Some of the physicians felt they were being put at risk by **covering** for patients they did not know and they were taking on an extra patient workload.
Funding Considerations	• Physicians are not compensated for providing **coverage** for the NP's patients. • NPs are remunerated by the hospital; therefore, they are a costly expense for hospitals, compared to physicians who are mostly remunerated by the province. This creates a disincentive to hire more NPs (**critical mass**) to **cover** and support each other.
Employment Standard/Unionization	• Employment standards and union rules around the NP's scheduling and compensation require more NPs compared to physicians who **cover** the NP as the MRP, which makes it costlier to employ NPs (**funding**).

The interrelations among the concepts (Table 6.1) illustrate the many issues at various levels in the healthcare system, such as the healthcare system, organizational and team levels that should be considered when integrating the NP as MRP model of care. The statements in Table 6.1 are derived from this study and apply to the context of NPs as the MRP. Given that this is the

first study to look at the barriers and facilitators to integrating NPs as the MRP, this study is the first to report these associations. The interrelations between the concepts also explain why many of them are addressed several times, in different sections, throughout the discussion chapter.

6.4 Discussion

The following sections discuss how the findings from this study compare to those in the literature.

6.4.1 Facilitators

This thesis highlights that the NP's previous work experience on the unit, expertise, leadership, and motivation to implement this model of care were facilitators for the integration of the model. Similar findings have been reported in the literature (Andregard & Jangland, 2015; Elliott et al., 2016). Elliott et al. (2016) reported that the NP's knowledge of the local work context and clinical expertise, and their leadership, were all facilitators. Similarly, Andregard and Jangland's (2015) meta-synthesis (N=26), which explored the obstacles and opportunities for achieving optimal interprofessional collaboration with the introduction of an NP, reported a number of factors that facilitated the integration of NPs onto the healthcare team. The factors included the NP's extensive clinical experience, preferably in the same clinical context, and being known by the team members.

One of the facilitators identified in this thesis was the lack of the physicians' interest in taking on the role of the MRP for ALC patients, and providing coverage during the physician MRP's absence, in the traditional model of care. In the sociology of professions literature, this phenomenon is identified as *vacating a jurisdiction of care,* where one profession takes over a vacated jurisdiction of care (Abbott, 1988). Corazzini et al. (2012) defined Abbott's (1988) concept of professional jurisdiction as: "the extent to which a profession has the authority and

autonomy to determine the care tasks to be provided and who provides those care tasks, using specialized knowledge and judgment" (p. 28). It is the control that a profession exercises over certain acts. Because jurisdiction is more-or-less exclusive, the move of one profession's jurisdiction will affect the others (Abbott, 1988). In this thesis, the NP was able to practice as the MRP for ALC patients, a professional jurisdiction usually reserved for physicians, because of the vacancy for this particular jurisdiction of care.

Another concept that was discussed in this thesis is role formalization, which is the development and implementation process of the model of care. The participants identified this as a facilitator, reporting that the role formalization was well planned-out. From an organizational perspective, the organizational culture needs to be receptive to the change and not overburdened by other projects (Thrasher & Purc-Stephenson, 2007). One of the participants noted that the hospital had other projects going on at the time, and they could not fully prioritize the NP as MRP model of care project. Organizations should keep these considerations in mind when implementing an NP as MRP model of care.

6.4.2 Barriers

Many of the barriers found in this study, such as the lack of a critical mass or understanding of the NP's roles and responsibilities, and the high workload have been reported in the literature (Andregård & Jangland, 2015; Chiarella et al., 2020; Elliott et al., 2016; Schadewaldt et al., 2016).

Some authors have also reported that NPs often experience a lack of peer support as they are alone in their role and in the middle of both the nursing and medicine disciplines (Andregard & Jangland, 2015; Elliott et al., 2016). This view was also seen in the current study; the NP as the

MRP was alone in their role and was lacking NP peer support. Thus, being alone made it more challenging to pioneer the NP as MRP model of care.

In this study, some of the participants discussed the physicians' lack of understanding of the NP's role and liability. Participants reported that some physicians felt uncomfortable in providing coverage for the NP's patients, because they were worried they would be liable for the care given throughout the day. Professional liability is defined as: "Legal obligations arising out of a professional's errors, negligent acts, or omissions during the course of the practice of his or her craft" (Business Dictionary, 2020, as cited in Chiarella et al., 2020, p. 175). Liability between two healthcare professionals who are collaborating (i.e., an NP and a physician) depends on a determination of whose act caused the liability (Chiarella et al., 2020). A commonly held misconception is that NPs work under a physician's supervision and the physician is responsible for the NPs' decisions (Chiarella et al., 2020). In 2015, a 'myth buster' was released by the Canadian Health Human Resource Network (Ries, 2015) that discussed the reasons underpinning the perception that physicians are liable for care provided by other healthcare professionals. The authors stated that physicians are not liable for care provided by other health professionals (Ries, 2015). In a multi-case study conducted at five primary care sites in Australia, the experiences of NPs and medical practitioners working in collaborative practice models were investigated (Schadewaldt et al., 2016). The authors reported that medico-legal liability was less clear in collaborative care practices (Schadewaldt et al., 2016). In their study, most of the medical practitioners considered themselves to be ultimately responsible for all patients, including patients who were under the care of the NPs. In contrast, the NPs did not have this perception; they believed that the ultimate responsibility remained with the primary care provider (Schadewaldt et al., 2016). Chiarella et al. (2020) reported similar findings to those of Schadewaldt et al. (2016). This common misconception indicates the need for further education

about NPs' roles and legal responsibilities, and for a clear identification of each healthcare professional's roles and responsibilities to promote successful collaborative practices.

Nelson et al. (2014) wrote a report on optimizing scopes of practice to support innovative models of care to meet patient, community, and population healthcare needs. They found key barriers and enablers at the micro (practice), meso (institution) and macro (structure) levels to collaborative care practice. One of the barriers at the macro level was concerned with liability. When working in a collaborative practice, issues are sometimes raised about: the delegation of tasks by other regulated healthcare providers, the notion of "ultimate responsibility" and professional liability insurance (Nelson et al., 2014). Delegating a task that is within the scope of practice of another healthcare professional does not make the delegator liable for the actions of the person performing the task (Nelson et al., 2014). Some healthcare professionals, particularly physicians, may feel that they are "ultimately responsible" for the actions of other health professionals (Nelson et al., 2014), but they are not legally liable unless they have a legal obligation as an employer (Nelson et al., 2014). More provinces have moved or are moving towards a common legislative framework for healthcare professionals that is more flexible and considerate of the overlapping scopes of practice and collaborative care practices (Nelson et al., 2014). Still, some flexibility within the law is seen in the interpretation of liability. Based on Nelson et al.'s (2014) case law review of the matter, there remains a disproportionate level of concern about how liability impedes collaborative practices. This highlights the importance and need for education and more understanding of each professional's scope of practice on the team (Canadian Medical Protective Association, 2006). Flexibility in the legislation and scopes of practice can only go so far; more legislation is still needed to support the principles of shared cared models and to consider team- or institution-based liability rather than individual liability (Nelson et al., 2014).

Finally, while high workload was not part of Kilpatrick et al.'s (2013) framework, it was addressed by Elliott et al. (2016) who found that a high clinical caseload had a negative impact on NPs' abilities to undertake leadership activities or participate in the advancement of clinical practice. In this thesis, the NP's high clinical caseload caused difficulties in devoting time to the NP as MRP model of care, because the two clinical roles had to be managed at the same time.

6.5 An Ideal Model for Providing Care to Alternative-Level of Care (ALC) Patients

The participants in this study discussed the challenges in providing care to ALC patients. The Canadian Institute for Health Information (CIHI) defines alternate level of care (i.e., alternative level of care) as a term to identify individuals who no longer require acute care services but are occupying a bed in an acute care setting while waiting for placement or to be safely discharged back to the community (2012). This patient population is comprised mainly of older adults and marginalized individuals, including those who may have fewer discharge options due to financial constraints or a limited network of family/friends support (Burr & Dickau, 2017). These patients, who are usually medically stable, need to be kept in hospital due to deconditioning and the inability to safely return back to the community (Acorn, 2015).

The CIHI (2012) conducted a quantitative analysis linking three CIHI databases including the Home Care Reporting System, Continuing Care Reporting System, and Discharge Abstract Database. The study examined the care needs of older people in hospitals who were waiting to be discharged back to the community (CIHI, 2012). In their analysis, the CIHI (2012) found patient-related factors that predicted whether or not patients would require ALC days in acute care settings while waiting to be safely discharged home or to a long-term care facility. ALC days represented the number of days spent in hospital as an ALC patient (CIHI, 2012). The predictive factors associated to number of ALC days for patients waiting to be discharged home included:

ability to conduct activities of daily life and instrumental activities of daily living, incontinence, age, and marital status (CIHI, 2012). The analysis also identified several predictors associated to number of ALC days for patients waiting to be discharged to a long-term care facility, such as: medical stability, communication difficulties, number of medications, psychotropic medications, receiving care in an urban setting, challenging behaviors, incontinence, and pain (CIHI, 2012). The predictors demonstrate the complex care needs of patients who require a longer stay in an acute care facility once their acute care needs have been met (CIHI, 2012).

The results of this thesis study highlighted that ALC patients' care is often time consuming, involving a significant amount of social care, as demonstrated by the CIHI (2012) study. The physicians who participated in this thesis study found it difficult to prioritize these patients as they also needed to care for acute care patients. Some of the participants mentioned that the ALC patients were often the last priority; they tend to be seen briefly at the end of the day or not seen by a physician at all. Similar findings have been reported by other authors (Kuluski et al., 2017; McCloskey et al., 2015). McCloskey et al. (2015) conducted a qualitative study with patients and families designated ALC (N=18) to understand their ALC experience. The authors found that ALC patients did not feel prioritized because they were not considered to be ill (McCloskey et al., 2015). The patients often felt that their care was rushed and many of their needs for social, hygienic, and nutritional care were not met (McCloskey et al., 2015). One of the participants in this thesis stated that these patients could also benefit from a provider who was remunerated by the hour, such as an NP, instead of by the task, which would allow the provider to take the time needed without feeling pressured financially or constrained by time.

Manville et al. (2014) conducted a study with the goal to determine whether or not providing elderly ALC patients with interdisciplinary care on a transitional care unit (i.e., ALC unit) achieved better outcomes than providing them with standard hospital care. The medical care

on the transitional care unit was mostly provided by two family physicians who rotated every two months (Manville et al., 2014). The physicians, who specialized in the care of older persons, were highly involved with the unit. They participated in weekly interdisciplinary team rounds, provided education to the hospital staff about care of older persons, and provided leadership by helping to plan the structure and function of the unit to better address the care needs of older persons (Manville et al., 2014). Although the study did not include NPs, it showcased the importance of having consistent and involved clinicians who have the training and experience to address ALC patient needs.

In the current thesis study, some of the participants reported that the traditional hospitalist model of care at the hospital site did not benefit the ALC patient population. Considering their significantly longer hospital stay, ALC patients may benefit from care given by the same provider, which would ensure a consistent plan of care. Some authors have views that are similar to those held by the participants in this study, regarding the consistency of ALC patient care. Kuluski et al. (2017) conducted a qualitative study to understand the hospital experience of 15 caregivers (e.g., family members) of patients with cognitive impairment, requiring ALC while waiting for admission to a long-term care facility. One of the main themes that emerged was "inconsistency in quality of care delivery." The authors explained that when patients are transferred to an ALC unit, the interrupted continuity of care can cause a change in the quality of care received (Kuluski et al., 2017). They argue that having a consistent provider may improve the continuity of care, thereby improving the quality of care for the ALC patients (Kuluski et al., 2017). Doyle et al.'s (2013) systematic review, which explored the links between patient experience, clinical safety, and effectiveness, supported the notion that continuity of care contributes to quality of care. They found that continuity of care is part of the basic patient expectations about how care is delivered, which in turn, is a dimension of patient experience

(Doyle et al., 2013). These authors also supported the views of the Institute of Medicine's report on Quality of Health Care in America that argued that patient experience is one of the pillars of quality of care, alongside clinical effectiveness, patient safety, timeliness, and equity (2001).

For the past 10 years, HealthForceOntario has focused on initiatives that improve healthcare resource utilization, among which is enhancing legislation to expand the roles of NPs (Van Soeren et al., 2009). Van Soeren et al. (2009) discussed the importance of appropriate health human resources, especially in a time of financial crisis, growing needs, and changes. NPs in hospitals may be in the ideal position to address health human resource shortages, while providing safe and quality care that responds to patients' health needs. The NP as MRP model of care does not seek to replace physicians or other healthcare providers (Acorn, 2015). Rather, by utilizing NPs' scope of practice in the role of the MRP, physicians can care for more complex and critically ill patients (Acorn, 2015). Thus, the NP as MRP model of care may more effectively use resources for this patient population.

6.6 Trusting NPs

The establishment of a trusting relationship between an NP and members of the interdisciplinary team was a frequently mentioned concept in the interviews. The participants reported that an important reason the NP as MRP model of care was accepted on the unit was because the NP was well known by most members of the interdisciplinary team, including the covering physicians. The NP had already demonstrated knowledge and competence as a clinician and the team members felt comfortable with the care provided by the NP. Had the model been implemented with an NP with whom the team was unfamiliar, they may have been less accepting of the model of care. Trusting the NP was an essential facilitator to integrating the NP as MRP model of care. In this study, trust was a facilitator but it could also have been a barrier. KU #1

explained that the need to establish trust can pose a barrier to the acceptance of NPs onto the team if NPs are not known by the team members (personal communication with KU #1, September 25, 2020).

The concept of trusting NPs has been frequently discussed in the literature with regards to facilitating the boundary work between members of the interdisciplinary team (Kilpatrick et al., 2012a; Niezen & Mathijssen, 2014; Elliott et al., 2016). NPs need time to establish and gain the trust of their colleagues to be accepted by them (Kilpatrick et al., 2012a). In contrast, Schadewaldt et al. (2016) reported that the idea of trust did not seem to apply to physicians. From their interviews with NPs (N=6) and medical practitioners (N=13) working in collaborative practices in primary care, Schadewaldt et al. (2016) found that, for some NPs, it was difficult to integrate onto the team, and therefore, they felt they had to prove their worth. The authors stated: "This pressure to physically and professionally integrate was not observed for medical practitioners given their long-standing history as PHC professionals" (Schadewaldt et al., 2016, p. 7). Given the more recent role of NPs as the MRP in acute care settings, NPs must go the extra step to prove their value and capabilities to be accepted on the team. The NPs' knowledge of the local work context and clinical expertise in certain domains can facilitate the establishment of trust between NPs and the members of the interdisciplinary team (Kilpatrick et al., 2012a).

6.7 Tensions in the Findings: "It just wasn't worthwhile enough"

Throughout the stories and experiences mentioned by the participants, conflicting views were expressed with regards to certain topics such as coverage and remuneration. These are discussed further below.

The NP as MRP model of care was perceived as being "good" when the NP was present on the unit, but when the NP was not there (i.e., overnight and during weekends), the model of

care was no longer perceived as "good," because of the many issues that arose, such as difficulty communicating with a provider for the patient, and difficulties clarifying prescription orders for the pharmacy. One of the KUs identified this phenomenon as "capacity building," which they defined as "learning to not always have to rely on the NP to problem-solve" (personal communication with KU#1, May 19, 2020). The convenience becomes obvious when a clinician is continuously present on a unit and can quickly address any team member issues. Team members become accustomed to having a quick and easy, and accessible resource. Therefore, when the NP is not present on the unit, the flow of the unit can become destabilized as team members need to problem-solve without depending on the NP. Similar findings were also reported by Van Soeren et al. (2009) who found that interdisciplinary team members, including nurses, physicians, and social workers could become dependent on the NP's contributions to care, because they play a key role in care coordination and collaboration.

Despite the perceived benefits of the NP as MRP model of care (i.e., decreased workload of ALC patients for physicians and improved care delivery), the model created multiple inconveniences for the team. This was especially apparent for physicians and the pharmacy. More specifically, the participants reported a number of challenges that contributed to their perception that the NP as MRP model was not "*worthwhile enough.*" For example, the lack of compensation for physicians who covered the NP's patients, and the extra workload while covering overnight and on weekends were significant issues. Furthermore, the covering physician had to start their work week an hour earlier than usual to obtain the handover report from the NP before the NP left for the weekend. From the pharmacy's perspective, the unavailability of the primary care provider (i.e., the NP) at night and on weekends caused communication issues and delays in patient care. If the pharmacist required a prescription clarification after the NP had left, the

pharmacy would have to contact the covering physician who may not always feel comfortable about clarifying the order from another clinician.

With the NP as MRP model of care, handovers are needed between the NP and the covering physician at each care transition point, such as each night-to-morning, and before and after each weekend as the care responsibilities shift to the covering physicians during the NP's off hours. The change in provider is a patient safety concern; it is considered a high-risk activity, which could increase the risk for an otherwise preventable medical adverse event (Fealy et al., 2019; Petersen et al., 1994). Several factors have been reported to contribute to preventable medical errors, such as an unfamiliarity with the patients being covered by the physician, miscommunications, and a lack of shared information (Petersen et al., 1994; Sutcliffe, 2008). Other negative influences include a lack of institutional policies or protocol at the time of the handover, an insufficient location for the handover, interruptions, and a lack of time (Fealy et al., 2019).

The findings from this thesis project demonstrate that even though the NP as MRP model of care ensures the same provider week after week, it also create an increased handover rate. On one hand, the NP as MRP model of care provided the same provider on a daily basis, and the care is usually provided during the day. On the other hand, having a different provider cover for patients during the NP's off hours increased the number of handovers, compared to the hospitalist model where hand-offs are done once a week. The drawback of the hospitalist model is that each week, patients have a different provider. This can pose a safety risk to the patient if the handover is not done appropriately. The benefits and risks of both models need to be carefully assessed to find the right balance between continuity/consistency of care and patient safety. Additional policies and practice recommendations and use of a standardized handover tool are needed to better structure handovers (Fealy et al., 2019).

In sum, the participants in this study reported that the drawbacks with the model were not worth the benefits. Many of the reported challenges caused more inconveniences than benefits, especially for the physicians and the pharmacy. Furthermore, the issue about the lack of physician compensation to provide coverage for the NP's patients, and other issues connected to the pharmacy that are specific to the NP as the MRP role have not been reported elsewhere. These issues arise when the NP is the MRP, in contrast to situations where the NP is a consultant or collaborator on a team. In such circumstances, the final decisions about patient care and after-hour care delivery are the responsibility of the physician MRP.

6.8 The Central Issue: Coverage

In this study, the barrier that created the greatest challenge for the integration of an NP onto the team was coverage. Coverage is the process of ensuring that a healthcare professional, such as a physician or NP, is available and responsible for providing care to patients during the primary care provider's (i.e., the NP's) off hours (see Glossary in Appendix A).

Little literature addresses the concept of coverage, likely because NPs work on a consultative shared-care basis, where the physician is the most responsible provider and usually tasked with finding coverage. In other words, since NPs are not usually the most responsible provider when working in a consultative shared-care role, they would not be responsible for ensuring coverage during off hours.

By contrast, in this study (where the NP is the most responsible provider), the NP needed another clinician to cover for their patients during off hours, which highlights the challenges faced by NPs to arrange for coverage in these circumstances. The current study appears to be the first to report these findings.

While physicians have professional obligations to ensure after-hour care coverage for their patients (College of Physicians and Surgeons of British Colombia, 2015; College of Surgeons and Physicians of Ontario, 2018), it is unclear whether or not they have the same obligation towards the patients of NPs. For example, after hour coverage is normally provided by other physicians who take turns providing on-call coverage (i.e., a rotating schedule). No remarks were found in the literature addressing the physicians' responsibilities toward the NPs' patients.

Research indicates that finding coverage has been a longstanding issue in healthcare (O'Malley et al., 2007), particularly in the contexts of the emergency department, primary care, and radiology medicine. The reluctance of physicians to provide on-call coverage was mostly associated with a lack of adequate remuneration, lifestyle disruptions, and the fear of malpractice (McConnell et al., 2007). Many hospitals have resorted to providing nightly or monthly stipends (i.e., allowance) to physicians to guarantee some form of remuneration for their provision of on-call coverage (McConnell et al., 2007). In any case, these stipends are costly for hospitals (McConnell et al., 2007).

In this study, physicians suggested they were not comfortable providing coverage in general, regardless of whether the covered clinician was a fellow physician or an NP. The model of care used in this study site allowed hospitalists to be responsible for their own patients for one week; working for 24 hours a day during the same week. Accordingly, the hospitalists did not require coverage, and for that reason they were not accustomed to covering other clinicians' patients in general. The physicians in this study provided a number of reasons for not being comfortable about providing coverage for the NP's patients, such as not knowing the NP's patients and a perceived greater and unsafe workload. This was the case even though the patients were considered medically stable. Thus, the reluctance of physicians to provide coverage for the

NP's patients was not related to the NP's role as the MRP in particular, but more related to their discomfort about providing coverage in general, for reasons stated above.

The second concern highlighted in this study by the physicians with regards to coverage was the lack of compensation for covering the NP's patients and the extra workload associated with the patients. In other words, it was more work without more pay. The physicians could only bill for their services if they did an in-person assessment. According to the participants in this study, at the hospital site, physicians were guaranteed a minimum weekly amount. If their billings did not reach that amount, the hospital would provide them with a top-up that would constitute the difference between the minimum amount and their billings. Therefore, all physicians would ultimately be remunerated the same amount, as their billings would not likely surpass the minimum weekly amount. This payment model creates a disincentive for physicians to provide coverage as they would be taking on an extra workload, but they would not be compensated more at the end of the week.

As a possible alternative to having the hospitalist provide coverage, a team of NPs could be created to provide coverage for each other. Nevertheless, such an option may be challenging due to the lack of NPs having the required qualifications for this role (i.e., a lack of critical mass), the increased cost of hiring more NPs, and the need to respect employment standard regulations that could make scheduling the NPs' work times more complex.

6.9 A Healthcare System-Level Challenge

The healthcare system-level was the most discussed level from the framework. Among the participants, the predominant discussion points were about funding considerations and remuneration. At this level, only barriers were identified.

6.9.1 Funding Considerations

The different funding and remuneration structures for physicians and NPs create barriers for NPs' integration in hospitals. The main reasons included: 1) the fee-for-service model, 2) physician vs NP remuneration models, and 3) lack of government funding for NPs' positions. The physicians' fee-for-service remuneration model has been mentioned by several authors as being incompatible with interprofessional collaboration (Bourgeault & Mulvale, 2006; Doetzel et al., 2016; Martin-Misener, 2010; Van Soeren et al., 2009). The NPs who were interviewed (N=30) in Van Soeren et al.'s (2009) study discussed the unfairness due to financial limitations that limited their full integration onto the team and the physicians' billing model that put physicians and NPs against each other. First, NPs are perceived as a financial threat to physicians as they are "taking away" patients from physicians and thereby compromising their income (Martin-Misener, 2010). In this study, the physicians had mixed feelings about their loss of income with the NP as MRP model. Some physicians perceived the model of care to cause a financial loss since an NP would be caring for patients that otherwise would have been cared for by the physicians. Others, however, did not feel financially threatened by the model on the ALC unit as physicians in Ontario cannot bill as much for services given to patients who have been hospitalized for more than 30 days. Therefore, for some of the physicians, not having these patients under their care did not have a financial impact on them. Second, since NPs' positions are funded through the hospital budget, their positions are vulnerable to financial cutbacks (Van Soeren et al., 2009). Therefore, to grow and sustain their roles in hospitals, NPs' positions should be funded outside the hospital's budget (Van Soeren et al., 2009).

This study highlighted the incompatibilities between the remuneration models of physicians and NPs that make it difficult for interprofessional collaboration. NPs' salaries come directly from the hospital's budget, whereas, the physicians are considered a "cheaper labor"

from the hospital's perspective since they are mostly remunerated by the government. This creates a disincentive for the hospitals to employ NPs. Finally, no extra government funding has been allocated to the hospitals for employing NPs, which would otherwise encourage hospitals to hire NPs rather than penalize them. Initiatives such as the NP as MRP model of care would need to be financially supported by the government for hospitals to implement this model of care. Without some form of support, the hospitals have no financial incentive to implement new models of care.

6.9.2 Unionization/Employment Standards Regulations vs the Independent Contractor Model

The employment relationship between the MRP and the hospital appears to be a key determinant for explaining why one profession is favored to be the MRP instead of another. NPs are employees of the hospital, and governed by provincial employment standards legislation, namely the Employment Standards Act (Ontario Government-Ministry of Labour Training and Skills Development, 2020). Physicians, on the other hand, are independent contractors and do not fall under the provincial employment legislation; they apply for privileges at a hospital (Ontario Government-Ministry of Labour Training and Skills Development, 2020). This distinction is an important system-level barrier since the hospitals will generally find it more economically desirable to hire independent contractors (i.e., physicians), and would avoid additional obligations that would come with hiring employees like NPs.

For example, provincial employment laws dealing with employee protection stipulate the number of hours employees can work in a work day, the number of worked days in a row, and rest periods and vacation time (Ontario Government-Ministry of Labour Training and Skills Development, 2020). Independent contractors generally do not benefit from such protections (Ontario Government-Ministry of Labour Training and Skills Development, 2020). Therefore,

there is no financial disadvantage for hospitals to have physicians working the entire day, seven days a week.

As a consultant in a shared care model, which is the context of care for most studies concerning NPs (Acorn, 2015; Van Soeren et al., 2009), NPs do not have to organize after hour coverage, because they are not the main care provider. Therefore, the lack of congruency between employment standard regulations is not a problem. Nevertheless, with the NP as MRP model of care, an NP, as the main care provider, must ensure the after-hour care delivery, similar to physicians. At this time, a gap exists in the literature regarding how discrepancies between employment standard regulations create a barrier to the integration of NPs in hospitals. Even articles that address system-level barriers to the integration of NPs do not discuss the implications of employment standard regulations (Bourgeault & Mulvale, 2006; Elliott et al., 2016; Gould et al., 2007; Martin-Misener, 2010; Van Soeren et al., 2009).

Although the participants spoke about the union being restrictive, provincial employment standard regulations regulate employees (i.e., NPs) with regards to their working hours, rest periods, and vacation time (Ontario Government-Ministry of Labour Training and Skills Development, 2020). Even if NPs were not unionized, they would still be employed under these regulations that protect them and limit their working hours. In the Kilpatrick et al. (2013) framework, unionization was identified as a concept in the healthcare system-level. Union rules may also contribute to accentuating the discrepancies in the employment standard regulations between NPs and physicians, thus creating another disincentive for hospitals to employ NPs. For example, if an NP works on call, they need to be compensated for every hour for which they are on call. Should they get called and be required to go to the hospital to provide care, they are to receive compensation for a minimum of four hours (Ontario Nurses Association [ONA], 2020).

The issues regarding unionization as a barrier to the NP as MRP model of care lie more in the discrepancies between the NPs' and the physicians' employment regulations rather than unionization. The term "unionization" used in Kilpatrick et al.'s (2013) framework may be more fitting if it was replaced with the broader "employment standard regulations," which would more clearly show how employment regulations and standards influence the integration of an NP onto an interdisciplinary team.

6.9.3 Medial Dominance

According to Freidson (1985), medical dominance is "the relation of the medical profession to most other healthcare occupations in the division of labor" (p. 13). Historically, the other healthcare professions existed under medicine's shelter, and were only allowed to exist according to what medicine allowed them to do (Freidson, 1985). The power of medicine in regulating other health professions, and the economic monopoly medicine has over the healthcare system has allowed for its domination over the division of labor in healthcare (Freidson, 1985; Kilpatrick et al., 2012b). Kilpatrick et al. (2012b) discussed the unequal distribution of power between medicine and nursing leaders, and within the team, which can affect the NPs' role enactment. Although the findings in this study demonstrate that many of the participating physicians were supportive of the NP role, system-level factors (i.e., funding and remuneration models) and institutional structures that perpetuate the medical dominance may hinder the integration of the NP as MRP model of care.

The concept of medical dominance emerged from the participant interviews. In this study, the participants reported that this innovative model of care, which could change the way we provide care, presents a threat to the traditional medical model that is familiar to most health professionals. NPs are often perceived as being a threat to professional boundaries and role

functions (Andregård & Jangland, 2015; Elliott et al., 2016; Kilpatrick et al., 2012a; Niezen & Mathijssen, 2014a). In addition, current funding, remuneration, and institutional structures perpetuate the physicians' monopoly in healthcare and do not allow for new and innovative models of care, such as the NP as MRP model of care (Martin-Misener, 2010; Bourgeault & Mulvale, 2006).

Bourgeault and Mulvale (2006) proposed that medical dominance is embedded in structures at the macro and meso levels of the healthcare system including regulatory, economic, and institutional factors. They referred to this concept as structural embeddedness of medical dominance (Bourgeault & Mulvale, 2006), where it is embedded in the arrangements of funding and heathcare provision (Bourgeault & Mulvale, 2006). Likewise, in the findings of this thesis, funding considerations and remuneration, and unionization/employment standard regulations were the biggest barriers to the integration of the NP as MRP model of care. Generally, these barriers prevented alternative measures that could ensure coverage for the NP's patients.

Bourgeault and Mulvale (2006) also highlighted the embeddedness of medical dominance in the access to public funding since the physicians and hospital/institutional-based services were mainly funded through the public system. The unequal access to the same funding pool creates a hurdle for NPs (Bourgeault & Mulvale, 2006). Because NPs are not directly funded from the public system like physicians, and without extra funding, NPs cannot easily enact their roles and pursue innovative models of care. Nevertheless, at a system-level, healthcare funding all comes from the same provincial public funds but compensation is structurally set up to favor physicians (Bourgeault & Mulvale, 2006). This issue was demonstrated from the findings of this study. The participants discussed the need for government funding separate from the hospital's budget for the NP as MRP model of care to be successfully integrated and sustained. The participants also mentioned that the funding for physicians and NPs ultimately comes from the same provincial

funds, but it is distributed differently, which causes the unequal access and a disadvantage for NPs.

6.10 Implications of Knowledge Users

Three KUs were consulted during the course of this project as part of the approach to use the principles embedded in integrated knowledge translation. All three KUs, who were NPs, were actively involved in the implementation the NP as MRP model of care in a hospital setting. The KUs provided feedback for the interview guide, the types of participants to be recruited, the results and discussion chapters, and suggestions for the dissemination of results. Their involvement in the project was valuable as it allowed the researcher, who is not an NP, to understand the results from the perspective of NPs who have been in the role of the MRP. This allowed for more reflection on practice and policy implications and to view the results from a practice perspective. The KUs also spoke about their own experiences as NPs as the MRP during our meetings. They indicated that they related to the barriers and facilitators reported in this study, in further support of the results.

6.11 Limitations of Kilpatrick's Framework

A number of limitations were identified in Kilpatrick et al.'s (2013) framework. First, the concepts in the structure dimensions, the outcomes, and the concepts in the central process dimension (Perceptions of Team Effectiveness) were not defined by the authors. The lack of definitions made indexing the data with the framework's terms somewhat difficult during the data analysis. The concept definitions were created based on the results from the current study, and by other studies by the same authors (Kilpatrick et al., 2012a, 2012b, 2013) (see the Glossary in Appendix A). Second, a number of concepts in the framework are vague and encompass several sub-concepts that are not clearly included in the framework. For example, Kilpatrick et al.

(2013) included the concept of funding considerations in the framework; however, funding considerations could include concepts such as funding, financing, and remuneration, which were not developed in the framework (Nelson et al., 2014). Similarly, the concept of legislation and licensing board policies lacked definition and was vaguely described in the framework; thus, it is unclear if it included the concept of professional liability, which was identified in many of the interviews.

Two studies used the Kilpatrick et al. (2013) framework to analyze their data as was done in the current study. First, Elliott et al. (2016) conducted a scoping review (N=34) to identify the barriers and enablers to advanced practitioners' (i.e., NP, nurse consultant, APN, and midwife practitioner) ability to enact their leadership role in all care settings including hospital, community, and public health. One of the findings was that most of barriers and enablers to advanced practitioners' leadership enactment were at the organizational-level. In contrast, this thesis found that most of barriers to the integration of the NP as MRP model of care were at the healthcare system-level. Although Elliott et al.'s (2016) study had a different aim and specifically looked at leadership enactment, a comparison of their findings to those of this thesis are relevant. Integrating a new model of care partly involves the NPs' ability to enact their leadership roles. Elliott et al. (2016) did not report any limitations with the Kilpatrick et al. (2013) framework, but suggested the need to expand and include the leadership role enactment component in the structural dimensions.

The second study that used this framework explored patient and family perceptions of team effectiveness in teams with NPs in acute and primary care (Kilpatrick et al., 2016). The study was conducted in a Canadian context and it used a qualitative descriptive design (N=49). Similar to this thesis, they used the Kilpatrick et al. (2013) framework to analyze their data with

codes that were derived deductively from the framework. The authors did not report any limitations in the framework.

Although Kilpatrick et al.'s (2013) framework had limitations, it provided a global understanding of the various components at each level of the healthcare system that could affect the integration of NPs onto an interdisciplinary team. It also guided the data analysis of this thesis. The findings from this thesis were also supported by the findings from other frameworks, including one developed by the CAHS and the PEPPA framework (Nelson et al., 2014; Bryant-Lukosius & DiCenso, 2004).

6.11.1 The Canadian Academy of Health Sciences Conceptual Framework

The CAHS developed a conceptual framework for optimizing the healthcare professionals' scopes of practices to guide and illuminate the need for developing new models of care that can better address the needs of patients and promote collaborative care practices (Nelson et al., 2014). The objective of the assessment led by Nelson et al. (2014) was to review the evidence regarding the optimization of healthcare professionals' scopes of practice. The framework, which was part of the assessment process, was built from previous studies of interprofessional teams by Mulvale and Bourgeault (Bourgeault & Mulvale, 2006; Mulvale & Bourgeault, 2007).

The first study by Bourgeault and Mulvale (2006) examined the structural context at the organizational, and broader policy and institutional levels that influence the development of successful collaborative care teams in primary care. They found that economic factors, such as coverage of services, funding, and remuneration, influence collaborative care practices (Bourgeault & Mulvale, 2006). The authors also reported how institutional arrangements, such as how physicians are compensated and whether or not the compensation model supports

collaborative care practices fostered or hindered collaborative care practices (Bourgeault & Mulvale, 2006).

The second study by Mulvale and Bourgeault (2007) developed a framework to better understand the barriers and facilitators to interdisciplinary collaborative mental healthcare delivery. The authors used a multi-method, policy analysis approach to explore the factors that affected multidisciplinary collaboration in mental healthcare (Mulvale & Bourgeault, 2007). A circular framework was produced from the data analysis, with three levels from the center going outward, namely: the team, local, and global levels (Mulvale & Bourgeault, 2007). At the team level, the factors controlled by the family health team were: degree of hierarchy in regards to communication, team vision, professional cultures, and practice styles (Mulvale & Bourgeault, 2007). At the local level, the factors controlled by regional authorities were: population health needs, geography, provider supply, technology, and the local health system (Mulvale & Bourgeault, 2007). Finally, at the global level, the factors controlled by the central Ministry were: economic (i.e., funding, financing, and remuneration), regulation and legal (i.e., scopes of practice, registration requirements, provider accountability, and prescription privileges), and education and training (i.e., interdisciplinary training opportunities) (Mulvale & Bourgeault, 2007).

The CAHS framework, built on the conceptual models from the above two studies (Bourgeault & Mulvale, 2006; Mulvale & Bourgeault, 2007; Nelson et al., 2014), resembled Kilpatrick et al.'s (2013) framework, which also had a circular format with multiple layers in the healthcare system, including a practice-level, institution-level, and system-level. At each level, the concepts are identified as barriers or enablers that may affect the optimization of healthcare professionals' scopes of practice and supporting models of care. A visual presentation of the CAHS framework is presented in Figure 6.2.

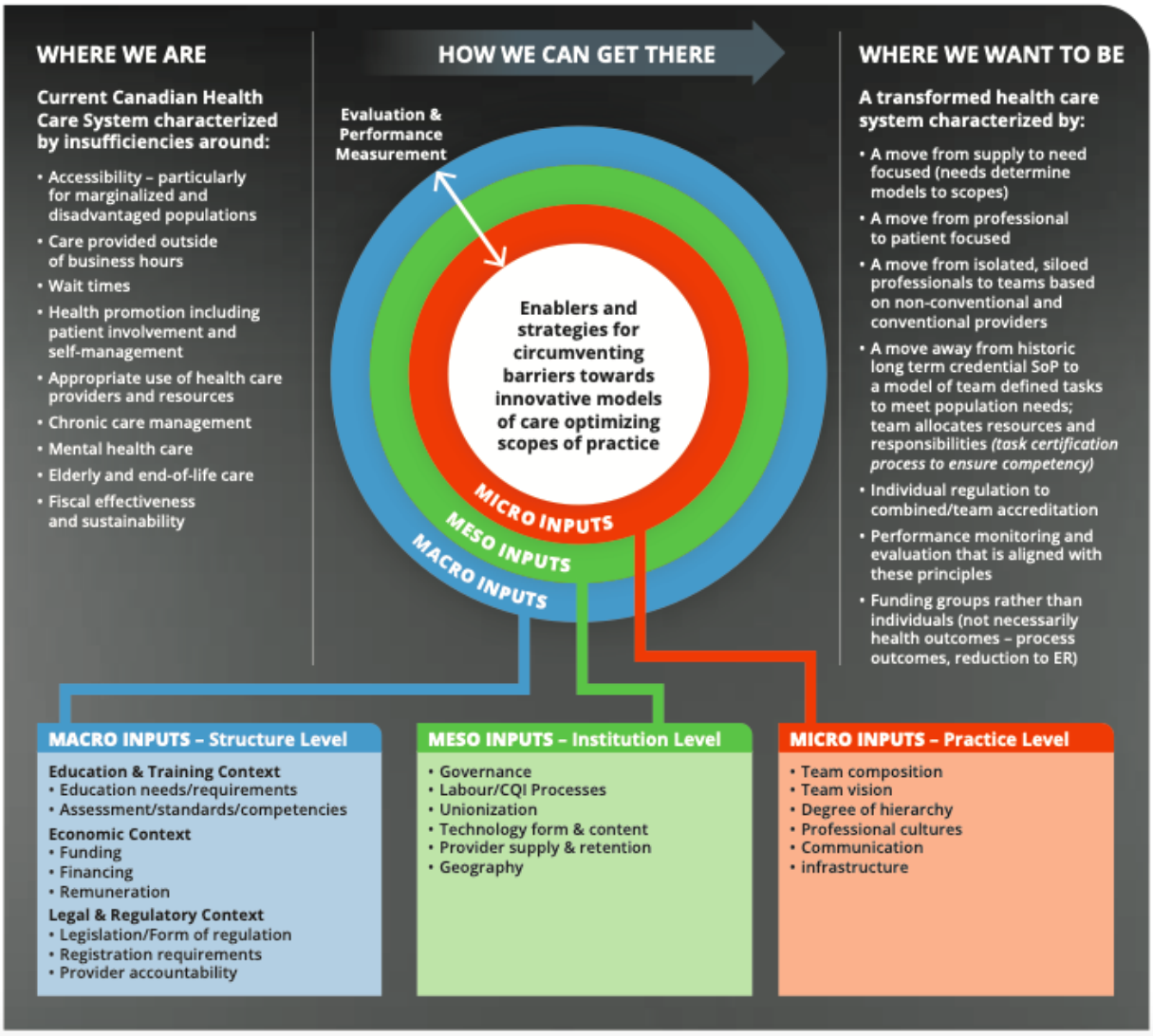

Fig. 6.2 The Canadian Association of Health Sciences Framework – Scopes of practice that support innovative models of care to address population health needs and a transformed healthcare system (Nelson et al., 2014).

Many of the concepts from the CAHS framework are also indicated in Kilpatrick et al.'s (2013) framework, though the CAHS teased apart certain concepts, which were also found to be relevant to this study. For example, the CAHS model distinguishes funding, financing, and

remuneration, whereas the Kilpatrick model identifies these together as funding considerations. In this thesis, all three of the funding concepts (i.e., funding, financing, and remuneration) were found to influence the integration of the NP as MRP model of care. In another example, Kilpatrick et al. (2013) identified Legislation and Licensing Board Policies. Alternatively, in the CAHS model, the authors included Provider Accountability within the concept of Legal and Regulatory issues. These additional specificities and distinctions are worth adding to the Kilpatrick et al. (2013) framework as they provide a more complete definition. Finally, the results of this study also generated a new concept, Technology, which was also included in the CAHS model at the institutional-level.

Similar to the results of this study, the CAHS model identified multiple barriers to optimizing scopes of practice and supporting innovative models of care including healthcare professional accountability/liability concerns, payment models that do not support changes in scopes of practice, professional hierarchies, and professional cultures (i.e., lack of trust and role clarity, job protectionism, turf wars, and task escalation) (Nelson et al., 2014). The similarities between the CAHS model and Kilpatrick et al.'s (2013) conceptual framework with the results from this study illustrate the recurrent issues in optimizing health professionals' scopes of practice and support of innovative models of care, such as the NP as MRP model of care.

6.11.2 Participatory, Evidence-Based, Patient-Focused Process for Advanced Practice Nursing Role Development, Implementation, and Evaluation – the PEPPA Framework

The findings of this study were also supported by other frameworks, namely the "participatory, evidence-based, patient-focused process for advanced practice nursing role development, implementation, and evaluation" (the PEPPA framework) (Fig. 6.3). The purpose of the PEPPA framework is to address implementation processes and issues that are specific to

the APNs' roles (Bryant-Lukosius & DiCenso, 2004). In particular, the PEPPA framework guides the introduction and evaluation of the APNs' roles to promote the successful implementation of their role and proper use of APNs' expertise (Bryant-Lukosius & DiCenso, 2004). According to Bryant-Lukosius and Dicenso (2004), "the process [PEPPA framework] promotes increased understanding of APN roles and optimal use of the broad range of APN knowledge, skills, and expertise in all role domains and scopes of practice" (p. 530).

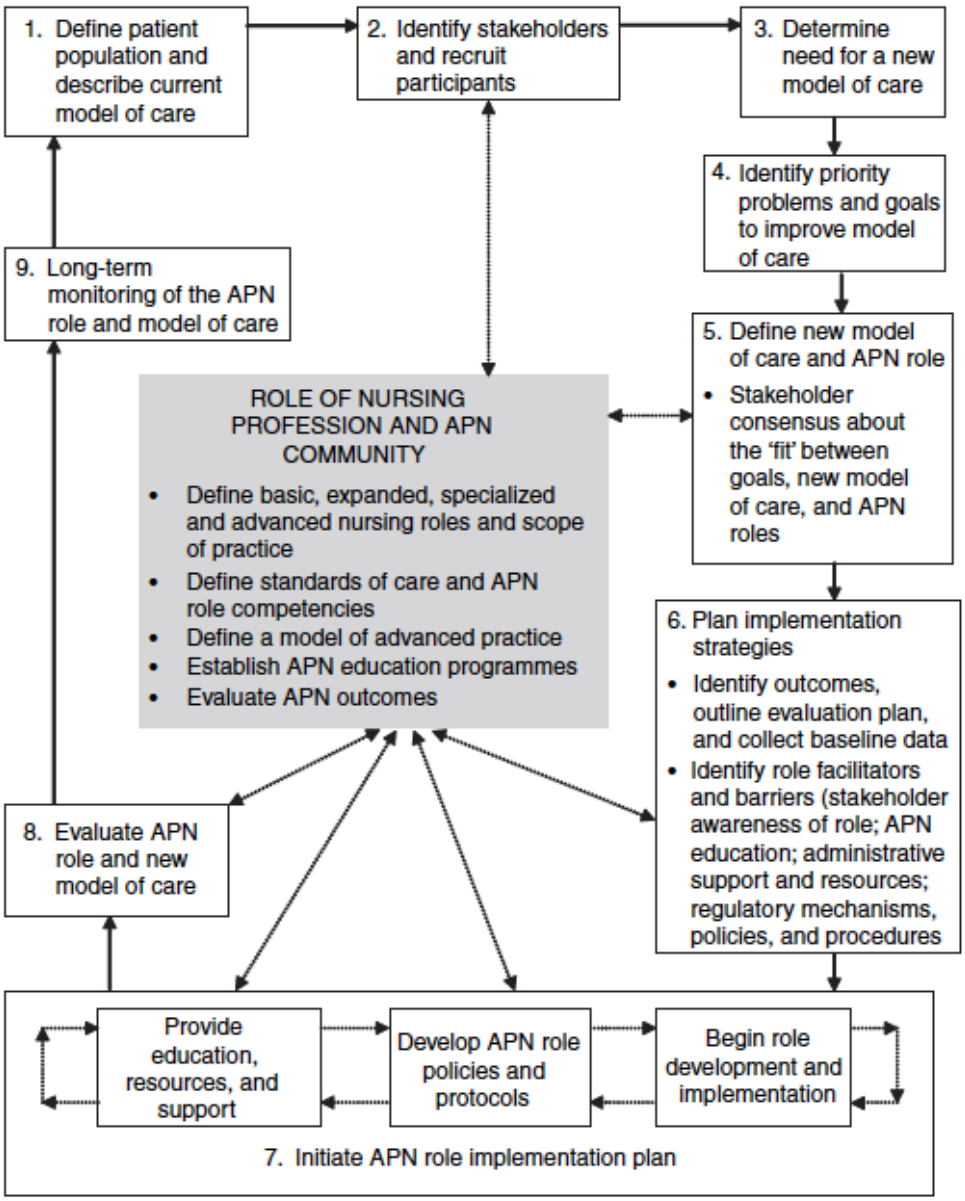

Fig. 6.3 The PEPPA framework: A participatory, evidence-based, patient focused process for advanced practice nursing (APN) role development, implementation, and evaluation (Bryant-Lukosius & DiCenso, 2004).

The PEPPA framework supports the findings of the current study in two ways: 1) it promotes models of care that are patient-focused, holistic, and integrated, rather than medical models that are focussed on illness; and 2) it promotes addressing the barriers and facilitators to APN role implementation (Bryant-Lukosius & DiCenso, 2004).

First, like the CAHS model (Nelson et al., 2014), the PEPPA framework highlights the importance of focusing on patient-needs when implementing an APN role (Bryant-Lukosius & DiCenso, 2004). According to the authors of the PEPPA framework, "in the PEPPA framework, needs assessment moves beyond supply and demand issues to identify environmental factors that affect patient care and the introduction of APN roles" (Bryant-Lukosius & DiCenso, 2004, p. 532). In the PEPPA framework, Step #3 is to determine the need for a new model of care (Bryant-Lukosius & DiCenso, 2004), which is achieved by identifying patient and family needs. The congruence between the findings of the CAHS model, the PEPPA framework, and the findings from this study highlight the need for models of care to be based on patient needs rather than supply and demand or traditional boundary roles.

Second, to ensure system readiness for the APN role, the PEPPA framework's step #6 (Plan implementation strategies) identified the need to determine the barriers and facilitators to the APN's role development and implementation. This would allow to plan for implementation issues and identify strategies that need to be addressed beforehand. This thesis complements the PEPPA framework by identifying the barriers and facilitators to the integration of the NP as MRP model of care in a hospital setting. Thus, the PEPPA framework provides a further avenue to examine the integration of the NP as MRP model of care.

6.11.3 A Comprehensive Approach to Integrating the NP as the MRP Model of Care within a Hospital Setting

By accessing a variety of different frameworks, such as the CAHS model, the PEPPA framework, and Kilpatrick et al.'s (2013) framework, a more comprehensive approach can be established for implementing the NP as MRP model of care. This would provide decision-makers and hospital administrators with a better understanding of the processes and implications for integrating NPs as MRPs in hospitals.

For example, the PEPPA framework focuses on the implementation process for APN roles. Kilpatrick et al.'s (2013) conceptual framework provides an understanding of the system structures and key stakeholders involved when introducing an APN's role. These conclusions are complimented by those of the CAHS model. Finally, the findings from this study identify the barriers and facilitators to the integration of the NP as MRP model of care. Drawing on the different models and findings may provide a comprehensive toolkit for addressing the many processes and considerations for integrating an NP as MRP model of care.

6.12 Implications for Practice, Policy and Research

The findings from this study lead to many implications at the practice, policy, and research levels.

6.12.1 Practice

This study identified the barriers and facilitators that organizations can have when implementing the NP as MRP model of care. While this study examined one hospital's experience, having additional settings and experiences to draw upon could help other organizations in planning the implementation of the NP as MRP model of care, with a higher chance of success. Generally, this study adds to the small amount of literature on the NP as MRP

model of care, and can further promote and publicize this innovative model. The more this model of care is discussed and taught, the more likely organizations will be encouraged to implement it. In addition, this study promotes a model of care that can specifically address the needs of ALC patients.

First, healthcare institutions need to move from care models based on the HCPs' traditional boundary roles to patient-need and patient-focused models. Second, healthcare institutions need to explore alternative models of care, such as the NP as the MRP model of care that can respond to ALC patient care needs and make better use of their healthcare human resources. These recommendations reflect practice implications stated by Acorn (2015):

> This is not about the transference of power, namely important prescriptive, diagnostic and admission privileges and authorities. It is about the power to deliver safe quality care and optimize care accountabilities. Care should not be defined by geography or boundaries of hospital practices. Nurse practitioner competence and population needs should be the driver of meaningful change (p. 10).

Third, healthcare institutions should look into offering an on-call stipend per bed to encourage interprofessional collaboration and provide compensation for coverage.

6.12.2 Policy

The findings of this thesis illustrate the need for better policies for funding, financing, and remuneration to improve the integration of NPs in hospital settings. NPs and physicians need to be considered equally advantageous for patient care and hospitals so that the organizations can move from models of care that are focused on supply and the traditional scopes of practice to models of care that are focused on patients and their needs. This study illustrates the need for

policies that support collaborative care models between physicians and NPs rather than models that favor one group or create barriers for others.

To achieve successful collaborative care practices, many barriers at the healthcare system-level need to be addressed, including those in funding, financing and remuneration; provincial employment standard regulations and unionization; and the embeddedness of medical dominance in the healthcare system. Without addressing these barriers, organizations will find themselves struggling to implement innovative models of care such as the NP as MRP model of care. Regardless of the organization's willingness to integrate the NP as MRP model of care or the healthcare team's motivation to make it work, the healthcare system-level barriers highlighted in this study create challenges that cannot be addressed at the organizational-level. Rather, the challenges need to be addressed through policies that support and promote collaborative care practices.

First, alternative funding models must be developed to support collaborative care practices without penalizing HCPs. Second, union and employment agreements must be reviewed and made sufficiently flexible to support NPs as the MRPs in a context that allows for interprofessional collaboration. These recommendations were also proposed by Nelson et al. (2014).

6.12.3 Research

To date, this is the second study on the NP as MRP model of care, and the only study of its kind in a francophone setting. Given the paucity of literature on this model of care, more studies are needed to further explore the effectiveness of the model and the relevant patient, family, and staff experiences. Future studies should consider a variety of healthcare settings including acute care hospitals, community hospitals, and long-term care settings. A multi-case

study across Ontario hospitals that have implemented this model of care should also be considered. This would allow for an analysis of multiple experiences and increase the transferability of results. In addition, other NPs may be unofficially practising as MRPs. A workforce study should be conducted to examine how and where NPs are currently practising, how many are unofficially practising as the MRP and how they are enacting their roles. Such studies could be designed like that of Hurlock-Chorostecki et al. (2008) of NPs in acute care.

This thesis, along with the study by Acorn (2015), can create an avenue for future research on this model of care. More studies on the NP as MRP model of care will provide decision-makers and hospital administrators with a better understanding of the effectiveness of this model and the implications, barriers, and facilitators for a successful integration.

6.13 Limitations

This study had a number of limitations. First, given the COVID-19 pandemic that began during the recruitment phase of the study, the recruitment and data collection were halted at the hospital study site. Consequently, we were unable to recruit and interview nurses, physiotherapists, or occupational therapists. In addition, some participants, including leadership personnel who had previously agreed to participate in the study, were no longer able to do so given their increased workload during the pandemic. Because of the uncertainty of the pandemic and our inability to continue recruiting within a reasonable time-frame for a masters' project, we reviewed the data that had been collected from the nine participants and determined that it was sufficient to move forward with the data analysis. The perspective of nurses was considered in the data analysis from the interviews with two participants who were nurses in leadership positions.

Second, the circumstances mentioned above resulted in a small sample size (N=9). Although we interviewed participants from different professions and positions in the hospital, we may have missed some perspectives that could influence the transferability of results.

Third, this study analyzed the perspectives and experiences of participants from one hospital. The transferability of results thus may be influenced since each hospital has its own circumstances including who the NP as the MRP was, how the role was implemented, and how it was perceived by the team. Nevertheless, the KUs, who have been in the NP as the MRP role, were able to relate to these results and indicated that they captured their experiences.

Fourth, some limitations were identified in the framework analysis. Using the framework to index the data and place the data in the same format as the framework led to restrictions in the data analysis. The data was easily placed in the framework when it was simple, and easily summarized or associated with the terms of the framework, but when the data was more complex, it was difficult to place into the framework and report it according to the framework's concepts. Parkinson et al. (2016) cited similar limitations with framework analysis, when using it for their data in a qualitative, longitudinal study. The authors reported challenges in coding their data to the framework, which they described as a mechanical process. Furthermore, they believed that they lost sight of their research question and were less immersed in the data (Parkinson et al., 2016).

CHAPTER 7:

CONCLUSION

The reasons for the limited uptake of NPs as the MRP in Ontario hospitals remains unknown. The lack of information about the role of NPs as the MRP in hospital settings and the presence of a number of barriers may be hindering the integration of the model in healthcare institutions in Ontario. The findings of this thesis illustrate challenges at the healthcare system-level, which mainly revolve around the differences between funding and remuneration models and employment standards/unionization. The challenges make it financially and logistically unfavorable for hospitals to employ NPs, compared to physicians. To resolve issues at the team and organizational levels, especially with regards to the issue of coverage, problems at the healthcare system-level must first be addressed. Collaborative care between physicians and NPs as the MRP can only be possible if both groups can work using a care model that is compatible to both groups and does not favor one group over the other.

This is the first study that explored the barriers and facilitators to the integration of the NP as MRP model of care. The findings provide a greater understanding of the barriers and facilitators to this model of care and the reasons for the model's poor uptake. The findings also provide decision makers and hospital administrators with information on how they can integrate the model of care more effectively. Overall, the findings contribute to the advancement of the nursing discipline and encourage maximum utilization of the healthcare workforce to improve healthcare delivery.

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APPENDIX A

GLOSSARY OF TERMS

Glossary of Terms for the Conceptual framework of acute care nurse practitioner role enactment, boundary work, and perceptions of team effectiveness (Kilpatrick et al., 2013)

***This glossary also includes the new concepts found. There are identified in green.

Structure Dimensions

"The structural dimensions surrounding the three central process dimensions of the new framework depict the different layers that constrained or expanded the day-to-day working of the ACNPs and the team" **(**Kilpatrick et al., 2013, p.212).

1. **Patient-level**: The influence of the patient population on the integration of NPs in healthcare teams, such as patient demographics and their illness characteristics.
2. **NP-level**: The personal attributes of NPs, as well as their professional and educational experiences, which may influence their integration within the interdisciplinary team.

Personal Characteristics	• NPs' personal attributes may influence their integration within the interdisciplinary team, such as their motivation, leadership, and interest in the patient population as well as in the role of MRP.
Education	• NPs' education may influence their integration within the interdisciplinary team, such as advanced academic preparation that is particularly relevant to the patient population or NPs' clinical role.

3. **Team-level**: The structures of the interdisciplinary team that may influence the integration of NPs within the team.

Coverage	• The process of ensuring there is a health care professional, such as a physician or a NP, that is responsible for providing care to patients during the primary care provider's (in this case the NP) off hours. In this framework, this included a number of elements, such as compensation for covering patients, increased workload, and responsibility that comes with covering other clinicians' patients.
Critical Mass	• The number of NPs needed to sustain the NP as MRP model of care; this concept involves the availability of human resources (i.e. NPs). A lack of NPs to provide coverage for each other, to support each other, and to have a significant influential impact is a team-level element that may affect the integration of the NP as MRP model of care within the team.

Rewards	• The benefits the interdisciplinary team may receive from integrating NPs within the team, such as decreased workload related to NPs taking on care of alternative-level of care patients, and improved patient care.
Characteristics	• The interdisciplinary team has specific characteristics that may influence the integration of NPs within the team, recent departures of certain team members, availability of physicians, and team members specialties.

4. **Organizational- level**: The systems and processes at the institution level itself that may influence the integration of NPs in the interdisciplinary team.

Prescriptive authority	• The delegation of prescription authority to NPs and/or the NPs authority to prescribe orders (for example medications, laboratory and diagnostic tests) which may influence their integration within the interdisciplinary team **(**Kilpatrick et al., 2012).
Leadership	• The support provided by leaders involved in the implementation of the NP as MRP model of care. This support may affect the integration of NPs within the interdisciplinary team. Leaders' support can include strong belief in the model of care and various initiatives aimed at facilitating the integration of NPs within the team.
Common understanding	• Stakeholders' comprehension of the model of care and its purpose, may influence the integration of NPs within the interdisciplinary team. These stakeholders are typically individuals that are involved with the model of care in some capacity, such as members of the interdisciplinary team, as well as administrative and leadership personnel.
Role formalization	• This element involves all aspects that surround the development and implementation of the model of care. This includes, for example, how the role was formed and the steps that were taken to put the model of care in place. This concept also encompasses factors that are important to consider such as the availability of technology and the length of implementation time which may affect the integration of NPs within the team.
Technology	• The advancement of technology in clinical settings impacts the integration of NPs in health care teams may affect the integration of NPs within the team.
Implementation time	• The length of time the NP model of care was in place.
Workload	• The increased workload associated with the NP as MRP role, which may influence the integration within the team and the sustainability of this model of care.

5. **Healthcare system-level**: Different elements within the healthcare system which man influence the integration of NPs within the interdisciplinary team.

Legislation	• The legal considerations of implementing the NP role. NPs and other health care professionals, such as physicians, have legal responsibilities towards their patients. They have to respect and act within their regulatory body regulations. When implementing the NP role, it is important to consider and respect the legal obligations of each professional, as this may influence the integration of the role within the team.
Funding considerations	• The elements related to funding that may influence the integration and sustainability of the NP role within the interdisciplinary team, such as the cost of NPs, the organization that assumes the cost of NPs, cost and compensation models of NPs vs physicians, and compensation for caring for ALC patients.
Unionization	• The influence of union rules on the integration of NPs onto interdisciplinary teams.
Breadth of system implementations	• The amount of NP as MRP roles being implemented throughout Ontario hospitals.

Central Process Dimensions

Processes that affect how NPs enact their role after being integrated within an interdisciplinary team. Each dimension identifies team processes (i.e. how the team functions) following the integration of the NP (Kilpatrick et al., 2013). Each dimension presented below is affected by the several levels within the structure dimensions presented above (Kilpatrick et al., 2013).

1. **Boundary Work**: The shift of roles and accommodations that is made within the healthcare team when a new role is introduced within a team to accommodate the NPs' role (Kilpatrick, Lavoie-Tremblay, Ritchie, Lamothe, & Doran, 2012).

Trust	• The development of a relationship of trust between NPs and the members of the interdisciplinary team, which may influence the integration of NPs within the interdisciplinary team (Kilpatrick, Lavoie-Tremblay, Ritchie, Lamothe, & Doran, 2012).
Interpersonal dynamics	• NPs' interpersonal behaviours, such as their approach to care, their availability, and team work skills, which may influence boundary work (Kilpatrick, Lavoie-Tremblay, Ritchie, Lamothe, & Doran, 2012).
Time	• The passage of time it takes to accommodate the NP role within the team (Kilpatrick, Lavoie-Tremblay, Ritchie, Lamothe, & Doran, 2012). The longer team members are

	exposed to the NP role, and worked with NPs, the better they understand the role and accept it.

Outcomes	
Care outcome indicators that help the team evaluate their effectiveness after integrating a NP within the team (Kilpatrick et al., 2013a).	
Resource utilization	• Utilizing healthcare professionals' full scope of practice to maximize health care human resources which may be an outcome of the NP as MRP model of care.

APPENDIX B

Recruitment Email for Healthcare Team Members

This text will be copied to the hospital's email platform and sent to the health professionals who have worked with the NP as MRP (RN, PT, OT, MD, SW) as well as the directors who have influenced the implementation and discontinuation of this model (unit manager, VP of nursing and Medical Advisory Committee).

OBJET : Invitation à participer à un projet de recherche sur le rôle de l'infirmière praticienne en tant que professionnel de la santé le plus responsable.

Ceci est une invitation de l'équipe de recherche de Michelle Lalonde, professeure adjointe à l'École des sciences infirmières de l'Université d'Ottawa, à participer à un projet de recherche.

Bonjour,

Nous avons le plaisir de vous inviter à participer à une recherche dont l'objectif est d'évaluer l'efficacité du modèle de soins de l'infirmière praticienne en tant que professionnel de la santé le plus responsable chez une population gériatrique à risque de fragilité admise sur une unité de médecine axée sur le regain d'autonomie. Les résultats seront utilisés afin d'optimiser le fonctionnement des services cliniques, l'utilisation des ressources humaines et la performance organisationnelle.

Votre participation consistera à :

- Participer à une entrevue d'une durée de 15 à 30 minutes à [redacted] qui sera enregistré.

Pour participer à l'étude, vous devez :

- Professionnels de la santé (exemple : IA, PT, OT, travailleur social, médecin, etc.) qui prodigue des soins sur [redacted] et qui ont travaillé avec l'infirmière praticienne qui est dans le rôle de professionnel de la santé le plus responsable ;
- Être en mesure de lire et de comprendre le français ou l'anglais.

Votre participation est entièrement volontaire et se fera en dehors des heures de travail. Si ce projet vous intéresse ou si vous avez des questions, prière de répondre à Assistante de recherche par courriel [redacted] ou par téléphone au [redacted]

Le projet de recherche a été approuvé par le CÉR de [redacted] et de l'Université d'Ottawa.

Nous vous remercions à l'avance de votre collaboration.

Michelle Lalonde, Inf., MN, Ph.D.
Professeure adjointe, École des sciences infirmières, Université d'Ottawa
Chercheure affiliée à [redacted]

APPENDIX C

Recruitment Email for Managers and Leadership

This text will be copied to the hospital's email platform and sent to the unit manager and clinical facilitator, nursing vice-president and members of the medical advisory committee.

OBJET : Invitation à participer à un projet de recherche sur le rôle de l'infirmière praticienne en tant que professionnel de la santé le plus responsable.

Ceci est une invitation de l'équipe de recherche de Michelle Lalonde, professeure adjointe à l'École des sciences infirmières de l'Université d'Ottawa, à participer à un projet de recherche.

Bonjour,

Nous avons le plaisir de vous inviter à participer à une recherche dont l'objectif est d'évaluer l'efficacité du modèle de soins de l'infirmière praticienne en tant que professionnel de la santé le plus responsable chez une population gériatrique à risque de fragilité admise sur une unité de médecine axée sur le regain d'autonomie. Les résultats seront utilisés afin d'optimiser le fonctionnement des services cliniques, l'utilisation des ressources humaines et la performance organisationnelle.

Votre participation consistera à :

- Participer à une entrevue d'une durée de 20 à 30 minutes à [redacted] qui sera enregistré.

Pour participer à l'étude, vous devez :

- Gestionnaires ou professionnels cadres qui ont été impliqués dans l'implantation et/ou l'arrêt du modèle de soins de l'infirmière praticienne qui est dans le rôle de professionnel de la santé le plus responsable ;
- Être en mesure de lire et de comprendre le français ou l'anglais.

Votre participation est entièrement volontaire. Si ce projet vous intéresse ou si vous avez des questions, prière de répondre à Assistante de recherche par courriel [redacted] ou par téléphone au [redacted]

Le projet de recherche a été approuvé par le CÉR de [redacted] et de l'Université d'Ottawa.

Nous vous remercions à l'avance de votre collaboration.

Michelle Lalonde, Inf., MN, Ph.D.
Professeure adjointe, École des sciences infirmières, Université d'Ottawa
Chercheure affiliée à [redacted]

APPENDIX D

Consent Form for Healthcare Team Members

1. RENSEIGNEMENTS GÉNÉRAUX

Titre du projet : Infirmière praticienne dans le rôle de professionnel de la santé le plus responsable : Évaluation d'un modèle innovateur de soins chez une population gériatrique à risque de fragilité admise sur une unité de médecine axée sur le regain d'autonomie.

Chercheur principal
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Annie Boisvert, IA, BScN, MSc.N
Intérim Projet d'amélioration et directrice des services cliniques à [redacted]

Contact en cas d'urgence : En cas d'urgence, s'il vous plait contactez Michelle Lalonde par téléphone au [redacted] ou par courriel à [redacted]
Source de financement : [redacted]
Conflits d'intérêts : Il n'y a aucun conflit d'intérêt apparent ou possible.

2. INTRODUCTION

Avant d'accepter de participer à ce projet de recherche, veuillez prendre le temps de lire et de comprendre les renseignements qui suivent.

Ce document vous explique le but de ce projet de recherche, ses procédures, avantages, risques et inconvénients. Nous vous invitons à poser toutes les questions que vous jugerez utiles à la personne qui vous présente ce document.

3. INVITATION À PARTICIPER

Je suis invité (e) à participer à la recherche nommée ci-dessus qui est menée par Michelle Lalonde, professeure adjointe à l'École des sciences infirmières, Faculté des sciences de la santé de l'Université d'Ottawa.

Je suis libre de participer ou non à cette étude. Ma décision de participer ou de me retirer de l'étude n'affectera en rien mon statut d'employé actuellement ou dans le futur.

4. BUT DE L'ÉTUDE

Le but de ce projet est d'évaluer l'efficacité du modèle de soins de l'infirmière praticienne comme professionnels de la santé le plus responsable sur l'unité [redacted]. Pour se faire, nous allons décrire et comparer ce nouveau modèle au « modèle traditionnel » avec un médecin, explorer les expériences des professionnels de la santé, des patients et de leur famille avec ce modèle de soins.

5. CRITÈRES D'INCLUSION ET D'EXCLUSION
Critères d'inclusion

- √ Professionnels de la santé qui prodiguent des soins sur [redacted] et qui ont travaillé avec l'IP PPR (entre juin 2018 et décembre 2018).
- √ Parler le français ou l'anglais.

6. PARTICIPATION

Ma participation consistera essentiellement à participer à une entrevue individuelle pendant laquelle je répondrai à des questions demandées et je raconterai mes expériences avec l'infirmière praticienne. Les entrevues en groupe auront lieu à [redacted] selon ma disponibilité. Les entrevues seront d'une durée d'environ 30 minutes.

7. BIENFAITS

Ma participation à cette recherche aura pour effet de :

- √ Augmenter les connaissances sur le rôle de l'infirmière praticienne comme professionnel de la santé le plus responsable sur les soins aux patients.

- √ Appuyer la continuité de ce modèle de soins, en plus d'encourager l'utilisation de ce modèle dans d'autres secteurs.
- √ Appuyer l'utilisation du plein champ de pratique des professionnels de la santé pour assurer aux patients des soins adaptés à leur besoin.

Il n'y a aucun avantage direct pour moi de faire partie à cette recherche.

8. RISQUES

Je comprends que puisque ma participation à cette recherche implique que je raconte mon expérience de travail avec l'infirmière praticienne, il est possible qu'elle crée un inconfort émotionnel ou psychologique. Dans le cas où je ressens de l'inconfort émotionnel ou psychologique, l'entrevue sera temporairement arrêtée et de la communication thérapeutique sera entreprise par l'assistant de recherche pour me soutenir (à moins que je refuse et désire continuer l'entrevue). Je peux choisir de retourner à l'entrevue ou de me retirer complètement.

9. CONSERVATION DES DONNÉES

Les données recueillies en papier et les bandes audio des entrevues seront conservées de façon sécuritaire. Les bandes audio ainsi que les données transcrites seront conservées en format électronique sur le réseau sécuritaire de l'Université d'Ottawa dans un fichier protégé par un mot de passe que seules la professeure Michelle Lalonde et l'assistante à la recherche auront accès. Les données en papier seront gardées sous clé dans un classeur dans le bureau privé de Michelle Lalonde ([redacted]Université d'Ottawa). Les bandes audios seront supprimées aussitôt qu'elles sont transcrites. Toutes les autres données seront conservées selon la politique de l'Université d'Ottawa pendant une période de cinq ans. Les participants seront identifiés par un code numérique et les noms des participants ne seront pas transcrits.

10. CONFIDENTIALITÉ ET ANONYMAT

J'ai l'assurance du chercheur que l'information que je partagerai avec elle restera confidentielle sauf en cas d'obligation légale. Je m'attends à ce que le contenu ne soit utilisé que pour des fins scientifiques (conférence, publication pour des revues en sciences infirmières et en santé) et selon le respect de la confidentialité. Afin d'assurer ma confidentialité, un pseudonyme me sera attribué afin de m'identifier lors de l'entrevue. Les données retirées de mon dossier vont être codées par l'équipe de support décisionnel de [redacted] selon les politiques de [redacted] Il se peut néanmoins que les dossiers de recherche qui m'identifient soient inspectés en présence du chercheur ou par l'un des représentants de [redacted] par Santé Canada, et le Comité d'éthique de la recherche aux fins de contrôle de la recherche. Ceci étant dit, j'ai reçu l'assurance qu'aucun dossier m'identifiant, par exemple avec mon nom et mes initiales, ne sera autorisé à sortir du bureau du chercheur.

Les données recueillies pourraient être utilisées dans le futur par les chercheurs pour répondre à d'autres questions de recherche reliés aux soins d'une infirmière praticienne. Si les chercheurs souhaitent utiliser ces données, ils auront besoin de recevoir une approbation du comité d'éthique de la recherche de [redacted] et de l'Université d'Ottawa. Vous ne serez pas recontacté pour l'utilisation des données dans ce cas.

11. PARTICIPATION VOLONTAIRE

Ma participation à la recherche est volontaire. Je suis libre de me retirer en tout temps ou de refuser de répondre à certaines questions, sans subir de conséquences négatives. Si je choisis de me retirer de l'étude, les données recueillies jusqu'à ce moment ne seront pas utilisées dans l'étude et seront détruites le plus tôt possible.

12. REMBOURSEMENT/INDEMNISATION

Les frais de stationnement seront assumés par l'équipe de recherche lors de l'entrevue individuelle. De plus, un léger goûter sera servi lors de l'entrevue.

13. COMMUNICATION DES RÉSULTATS

Les résultats de recherche seront présentés dans le cadre de conférences scientifiques et feront l'objet de publications dans des revues en sciences infirmières et en santé.

14. RECHERCHES FUTURES

Notre équipe de recherche envisage de conserver toutes les données prélevées pour des recherches futures reliées au domaine suivant : Expérience des patients ayant reçu des soins d'une IP comme professionnel le plus responsable. Veuillez cocher un seul énoncé *:*

☐ J'accepte que le chercheur utilise mes données pour des recherches futures sans me recontacter pour me demander mon consentement.

☐ Je ne sais pas. Je veux que le chercheur me recontacte pour me demander mon consentement avant d'utiliser mes données pour des recherches futures.

☐ Je refuse que mes données soient utilisées pour des recherches futures.

15. RESPONSABILITÉ CIVILE

En acceptant de participer à cette étude, je ne suis privé d'aucun droit au recours judiciaire. Si je devais subir un préjudice en lien avec ma participation, je conserverais tous mes recours légaux à l'encontre des différents partenaires de la recherche.

16. CONSENTEMENT

Acceptation : Je, _____, accepte de participer à cette recherche menée par Michelle Lalonde. Pour tout renseignement additionnel concernant cette étude, je peux communiquer avec le chercheur.

Pour tout renseignement sur les aspects éthiques de cette recherche, je peux m'adresser au Comité d'éthique de la recherche de [redacted], à Ottawa, Ontario par téléphone [redacted] ou par courriel à [redacted]

Il y a deux copies du formulaire de consentement, dont une copie que je peux garder.

Signature du participant : _____ Date :_____
(Signature)

Signature du chercheur : _____ Date:_____
(Signature)

APPENDIX E

Consent Form for Managers and Leadership

1. RENSEIGNEMENTS GÉNÉRAUX

Titre du projet :Infirmière praticienne dans le rôle de professionnel de la santé le plus responsable : Évaluation d'un modèle innovateur de soins chez une population gériatrique à risque de fragilité admise sur une unité de médecine axée sur le regain d'autonomie.

Chercheur principal
Michelle Lalonde, Inf., MN, Ph.D
Professeure adjointe, École des sciences infirmières, Université d'Ottawa
Chercheure affiliée à [redacted]

Dr. Chantal D'Aoust Bernard, M.D.
Médecin à [redacted]
Professeure adjointe, Faculté de Médecine, Université d'Ottawa
[redacted]

Co-chercheurs
Douglas Angus, PhD
Professeur Emeritus, École de gestion Telfer, Université d'Ottawa
[redacted]

Janie Desroches, IA, MBA, MHA
Gestionnaire, qualité et expérience patient

Thérèse Antoun, IA, MScN
Directrice en médecine, réadaptation, gériatrie, services thérapeutiques, soins palliatifs et gestion des départs à [redacted]

Dr. John Joanisse, M.D.
Médecin en médecine familiale à [redacted]

Collaborateurs

Vanessa Helleur, IP Adulte, BScN, MN
Infirmière praticienne à [redacted]
Conférencière adjointe, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto

Annie Boisvert, IA, BScN, MSc.N
Intérim Projet d'amélioration et directrice des services cliniques à [redacted]

Contact en cas d'urgence : En cas d'urgence, s'il vous plait contactez Michelle Lalonde par téléphone au [redacted] ou par courriel à [redacted]

Source de financement : [redacted]

Conflits d'intérêts : Il n'y a aucun conflit d'intérêt apparent ou possible.

2. INTRODUCTION

Avant d'accepter de participer à ce projet de recherche, veuillez prendre le temps de lire et de comprendre les renseignements qui suivent.

Ce document vous explique le but de ce projet de recherche, ses procédures, avantages, risques et inconvénients. Nous vous invitons à poser toutes les questions que vous jugerez utiles à la personne qui vous présente ce document.

3. INVITATION À PARTICIPER

Je suis invité (e) à participer à la recherche nommée ci-dessus qui est menée par Michelle Lalonde, professeure adjointe à l'École des sciences infirmières, Faculté des sciences de la santé de l'Université d'Ottawa.

Je suis libre de participer ou non à cette étude. Ma décision de participer ou de me retirer de l'étude n'affectera en rien mon statut d'employé actuellement ou dans le futur.

4. BUT DE L'ÉTUDE

Le but de ce projet est d'évaluer l'efficacité du modèle de soins de l'infirmière praticienne comme professionnels de la santé le plus responsable sur l'unité [redacted] Pour se faire, nous allons décrire et comparer ce nouveau modèle au « modèle traditionnel » avec un médecin, explorer les expériences des professionnels de la santé, des patients et de leur famille avec ce modèle de soins.

5. CRITÈRES D'INCLUSION ET D'EXCLUSION

Critères d'inclusion

- √ Gestionnaires ou professionnels cadres qui ont été impliqués dans l'implantation et/ou l'arrêt du modèle de soins de l'infirmière praticienne qui est dans le rôle de professionnel de la santé le plus responsable (entre juin 2018 et décembre 2018).
- √ Parler le français ou l'anglais.

6. PARTICIPATION

Ma participation consistera essentiellement à participer à une entrevue individuelle pendant laquelle je répondrai à des questions demandées et je raconterai mes expériences avec l'infirmière praticienne. Les entrevues auront lieu à [redacted] selon ma disponibilité. Les entrevues seront d'une durée d'environ 20 à 30 minutes.

7. BIENFAITS

Ma participation à cette recherche aura pour effet de :

√ Augmenter les connaissances sur le rôle de l'infirmière praticienne comme professionnel de la santé le plus responsable sur les soins aux patients.
√ Appuyer l'utilisation du plein champ de pratique des professionnels de la santé pour assurer aux patients des soins adaptés à leur besoin.

Il n'y a aucun avantage direct pour moi de faire partie à cette recherche.

8. RISQUES

Je comprends que puisque ma participation à cette recherche implique que je raconte mon expérience de travail avec l'infirmière praticienne, il est possible qu'elle crée un inconfort émotionnel ou psychologique. Dans le cas où je ressens de l'inconfort émotionnel ou psychologique, l'entrevue sera temporairement arrêtée et de la communication thérapeutique sera entreprise par l'assistant de recherche pour me soutenir (à moins que je refuse et désire continuer l'entrevue). Je peux choisir de retourner à l'entrevue ou de me retirer complètement.

9. CONSERVATION DES DONNÉES

Les données recueillies en papier et les bandes audio des entrevues seront conservées de façon sécuritaire. Les bandes audio ainsi que les données transcrites seront conservées en format électronique sur le réseau sécuritaire de l'Université d'Ottawa dans un fichier protégé par un mot de passe que seules la professeure Michelle Lalonde et l'assistante à la recherche auront accès. Les données en papier seront gardées sous clé dans un classeur dans le bureau privé de Michelle Lalonde [redacted]Université d'Ottawa). Les bandes audio seront supprimées aussitôt qu'elles sont transcrites. Toutes les autres données seront conservées selon la [redacted]'Ottawa pendant une période de sept ans. Les participants seront identifiés par un code numérique et les noms des participants ne seront pas transcrits.

10. CONFIDENTIALITÉ ET ANONYMAT

J'ai l'assurance du chercheur que l'information que je partagerai avec elle restera confidentielle sauf en cas d'obligation légale. Je m'attends à ce que le contenu ne soit utilisé que pour des fins scientifiques (conférence, publication pour des revues en sciences infirmières et en santé) et selon le respect de la confidentialité. Afin d'assurer ma confidentialité, un pseudonyme me sera attribué afin de m'identifier lors de l'entrevue.

Les données recueillies pourraient être utilisées dans le futur par les chercheurs pour répondre à d'autres questions de recherche reliés aux soins d'une infirmière praticienne. Si les chercheurs souhaitent utiliser ces données, ils auront besoin de recevoir une approbation du comité d'éthique de la recherche de [redacted] et de l'Université d'Ottawa. Vous ne serez pas recontacté pour l'utilisation des données dans ce cas.

11. PARTICIPATION VOLONTAIRE

Ma participation à la recherche est volontaire. Je suis libre de me retirer en tout temps ou de refuser de répondre à certaines questions, sans subir de conséquences négatives. Si je choisis

de me retirer de l'étude, les données recueillies jusqu'à ce moment ne seront pas utilisées dans l'étude et seront détruites le plus tôt possible.

12. REMBOURSEMENT/INDEMNISATION

Les frais de stationnement et du transport en commun seront assumés par l'équipe de recherche lors de l'entrevue individuelle.

13. COMMUNICATION DES RÉSULTATS

Les résultats de recherche seront présentés dans le cadre de conférences scientifiques et feront l'objet de publications dans des revues en sciences infirmières et en santé.

14. RECHERCHES FUTURES

Notre équipe de recherche envisage de conserver toutes les données prélevées pour des recherches futures reliées au domaine suivant : Explorer les barrières et facilitateurs de l'implantation du modèle de soins de l'IP comme PPR dans un milieu hospitalier. Veuillez cocher un seul énoncé *:*

☐ J'accepte que le chercheur utilise mes données pour des recherches futures sans me recontacter pour me demander mon consentement.

☐ Je ne sais pas. Je veux que le chercheur me recontacte pour me demander mon consentement avant d'utiliser mes données pour des recherches futures.

☐ Je refuse que mes données soient utilisées pour des recherches futures.

15. RESPONSABILITÉ CIVILE

En acceptant de participer à cette étude, je ne suis privé d'aucun droit au recours judiciaire. Si je devais subir un préjudice en lien avec ma participation, je conserverais tous mes recours légaux à l'encontre des différents partenaires de la recherche.

16. CONSENTEMENT

Acceptation : Je, _____, accepte de participer à cette recherche menée par Michelle Lalonde. Pour tout renseignement additionnel concernant cette étude, je peux communiquer avec le chercheur.

Pour tout renseignement sur les aspects éthiques de cette recherche, je peux m'adresser au Comité d'éthique de la recherche de [redacted], à Ottawa, Ontario par téléphone [redacted] ou par courriel à [redacted]

Il y a deux copies du formulaire de consentement, dont une copie que je peux garder.

Signature du participant : _____ Date :_____
(Signature)

Signature du chercheur : _____ Date:_____
(Signature)

APPENDIX F

Interview Guide for Healthcare Team Members

Bonjour,

Le but de l'étude est d'évaluer l'efficacité du modèle de soins de l'IP en tant que PPR sur une unité de regain d'autonomie à [redacted]. Le but de cette entrevue est d'explorer vos expériences et satisfaction avec ce modèle de soins. Les résultats de ce projet vont augmenter nos connaissances sur l'impact du rôle d'une IP PPR sur les soins aux patients ainsi que sur les barrières et facilitateurs de l'implantation de ce rôle.

Questions

1. Est-ce que c'était la première fois que vous aviez une expérience avec une IP PPR?

2. Le rôle de l'IP comme PPR était-il bien défini ? En d'autres mots, compreniez-vous son rôle ? Expliquez.

3. Ce modèle de soins avait-t-il influencé ou changé la dynamique interdisciplinaire ? Si oui, comment ?
   -Il y avait-t-il des tensions dans l'équipe ?
   -Ce modèle de soins était-il accepté au sein de l'équipe ?

4. Quelles sont les facilitateurs de la mise en œuvre de ce modèle de soins ?

5. Quelles sont les barrières de la mise en œuvre de ce modèle de soins ?

6. Il y avait-t-il des lacunes dans ce modèle de soins ?
   Si oui, lesquelles.
   Si non, expliquez pourquoi.

7. En réfléchissant à vos expériences professionnelles avec ce modèle de soins, qu'est-ce que vous appréciez le plus?

8. En réfléchissant à vos expériences professionnelles avec ce modèle de soins, qu'est-ce que vous appréciez le moins?

9. Est-ce que vous étiez satisfait avec ce modèle de soins ? Précisez.

10. Avez-vous des commentaires ?

APPENDIX G

Interview Guide for Managers and Leadership

Bonjour,

Le but de l'étude est d'évaluer l'efficacité du modèle de soins de l'IP en tant que PPR sur une unité de regain d'autonomie à [redacted]. Le but de cette entrevue est d'explorer vos expériences et satisfaction avec ce modèle de soins. Les résultats de ce projet vont augmenter nos connaissances sur l'impact du rôle d'une IP PPR sur les soins aux patients ainsi que sur les barrières et facilitateurs de l'implantation de ce rôle.

Questions

1. Quelles facteurs ont mené au besoin d'implanter le modèle de soins de l'IP comme PPR ?
2. Quelles étaient les facilitateurs de la mise en œuvre de ce modèle de soins ?
3. Quelles étaient les barrières de la mise en œuvre de ce modèle de soins ?
4. Quelles ont été les difficultés éprouvées pendant que ce modèle de soins était en vigueur ?
    - 4.1 Il y avait-t-il des tensions interdisciplinaires ? Expliquez.
    - 4.2 Le rôle d'IP comme PPR était-il bien accepté par les pairs ? Expliquez
    - 4.3 Le rôle de l'IP comme PPR était-il bien compris ? Précisez.
    - 4.4 Le modèle était-il financièrement durable ? Si oui, comment. Si non, pourquoi.
    - 4.5 Il y avait-il suffisamment de support organisationnel et de politiques en place afin d'encadrer et maintenir ce rôle ? Expliquez.
5. Quelles sont les facteurs qui ont mené à l'arrêt de ce modèle de soins ?
6. En réfléchissant à vos expériences avec ce modèle de soins, qu'est-ce que vous appréciez le plus?
7. En réfléchissant à vos expériences avec ce modèle de soins, qu'est-ce que vous appréciez le moins?
8. Comment ce modèle de soins a eu un impact sur les soins donnés aux patients sur l'unité [redacted] ?
9. Avez-vous des commentaires ?

APPENDIX H

Interview Guide for NP as MRP

Bonjour,

Le but de l'étude est d'évaluer l'efficacité du modèle de soins de l'IP en tant que PPR sur une unité de regain d'autonomie à [redacted] Le but de cette entrevue est d'explorer vos expériences et satisfaction avec ce modèle de soins. Les résultats de ce projet vont augmenter nos connaissances sur l'impact du rôle d'une IP PPR sur les soins aux patients ainsi que sur les barrières et facilitateurs de l'implantation de ce rôle.

Questions

1. Quelles facteurs ont mené au besoin d'implanter le modèle de soins de l'IP comme PPR ?
2. Quelles étaient les facilitateurs de la mise en œuvre de ce modèle de soins ?
3. Quelles étaient les barrières de la mise en œuvre de ce modèle de soins ?
4. Comment votre rôle a été perçu par les autres membres de l'équipe interdisciplinaires ?
    - 4.1 Votre rôle était-il bien compris dans l'équipe ?
    - 4.2 Votre rôle/ champ de pratique était-il bien défini ? Expliquez.
    - 4.3 Il y avait-il des tensions dans l'équipe interdisciplinaire suite à l'implantation de ce rôle ? Si oui, expliquez. Si non, pourquoi croyez-vous ?
    - 4.4 Votre rôle était-il bien accepté au sein de l'équipe ? Si oui, expliquez. Si non, pourquoi croyez-vous ?
5. Il y avait-il suffisamment de support organisationnel et de politiques en place afin d'encadrer et supporter ce rôle ? Expliquez.
6. Étiez-vous capable d'exercer votre plein champ de pratiquer ? Expliquez.
7. Quelles sont les facteurs qui ont mené à l'arrêt de ce modèle de soins ?
8. En réfléchissant à vos expériences avec ce modèle de soins, qu'est-ce que vous appréciez le plus?
9. En réfléchissant à vos expériences avec ce modèle de soins, qu'est-ce que vous appréciez le moins?
10. Comment ce modèle de soins a eu un impact sur les soins donnés aux patients sur l'unité [redacted] ?
11. Avez-vous des commentaires ?

APPENDIX I

Knowledge Users Engagement Stages in the Research Process

Figure 2: Engaging stakeholders in the research process

Eerd & Saunders (2017)

APPENDIX J

Charts Used for Data Analysis

Theme 1- Patient level		Theme 2- ACNP level	
1.1 Demographics	1.2 Health and illness Characteristic	2.1 Personal Characteristics	2.2 Education

Theme 3- Team level				
3.1 Coverage	3.2 Co-location	3.3 Critical Mass	3.4 Rewards	3.5 Characteristics

Theme 4- Organizational level			
4.1 Prescription authority	4.2 Leadership	4.3 Common Understanding	4.4 Role Formalization

Theme 5- Healthcare system level			
5.1 Legislation	5.2 Licensing board policies	5.3 Funding consideration	5.4 Unionization

Theme 6- Boundary work				
6.1 Creating Space	6.2 Loss	6.3 Trust	6.4 Interprofessional dynamics	6.5 Time

Theme 7- Perceptions of team effectiveness					
7.1 Decision-making	7.2 Communication	7.3 Cohesion	7.4 Care coordination	7.5 Problem-solving	7.6 Patient -Family focus

Theme 8- ACNP role enactment	Theme 9- Outcomes			
8.1 Medical and advanced practice nursing role	9.1 Quality	9.2 Safety	9.3 Cost	9.4 Team

10-Other			
10.1 Role enactment/ role publicity	10.2 Implementation Time	10. 3 Workload	10.4 Technology

APPENDIX K

REB Approval for Secondary Data Analysis

[redacted]

Affilié à l'Université d'Ottawa | Affiliated with the University of Ottawa

Avis d'approbation éthique demande de modification
Comité d'éthique de la recherche (CÉR) de [redacted]

Le 29 mai 2020

Chercheure principale :

Michelle Lalonde
Université d'Ottawa
[redacted]

Co-chercheurs

Dre Chantal D'Aoust Bernard
[redacted]

Douglas Angus
[redacted]

Janie Desroches
[redacted]

Thérèse Antoun
[redacted]

Dr John Joanisse
[redacted]

Vanessa Helleur
[redacted]

Titre du projet: « Infirmières Praticiennes (IP) dans le rôle de professionnel de la santé le plus responsable : Évaluation d'un modèle innovateur de soins chez une population gériatrique à risque de fragilité admise sur une unité de médecine axée sur le regain d'autonomie _ **Phase 1** »

Numéro du dossier : 18-19-06-009

En conformité avec la dernière édition de l'Énoncé de politique des trois conseils — Éthique de la recherche avec des êtres humains (ÉPTC 2), le Bureau d'éthique de la recherche (BÉR)[redacted] vous informe que votre demande de modification soumise le 26 mai 2020 pour le projet mentionné ci-dessus a été **évaluée** et **approuvée** en comité délégué par le président du CÉR ou son délégué. Les décisions prises au sujet des dossiers évalués en comité délégué sont ratifiées par le comité lors de sa prochaine réunion plénière. Les modifications approuvées touchent les éléments et documents suivants :

- **Protocole de recherche** : utilisation des données de l'étude pour en faire une analyse secondaire

[redacted]

- Les données des entrevues (N= 9) vont être utilisées dans le cadre d'un projet de thèse pour une maitrise en sciences infirmières. Pour ce faire, l'étudiante, qui est une assistante de recherche sur ce projet, va faire une analyse secondaire des données qualitatives qui ont été recueillies par l'entremise d'entrevues individuelles. Le but de cette analyse secondaire est d'explorer les barrières et les facilitateurs à la mise en oeuvre du modèle de soins de l'infirmière praticienne (IP) dans le rôle de professionnel de la santé le plus responsable (PPR) dans un milieu hospitalier. Cette analyse secondaire des données va être encadré par le cadre conceptuel de Kilpatrick, Lavoie-Tremblay, Lamothe, Ritchie et Doran (2013) selon l'approche de « *Framework analysis* » de Ritchie et Spencer (1994).

- Les participants ont complété un consentement pour l'entrevue initiale et dans ce consentement, ils ont donné leur approbation pour que leurs données soient utilisées dans le contexte d'une autre étude et l'extrait du consentement a été soumis au CÉR avec la demande.

Le CÉR de [redacted] est constitué et exerce ses activités d'une manière conforme aux Bonnes pratiques cliniques : directives consolidées, du Conseil international sur l'harmonisation des exigences techniques relatives à l'homologation des produits pharmaceutiques à usage humain (CIH-BPC E6), à la Partie C, Titre 5, du Règlement sur les aliments et drogues et aux règlements applicables, à la partie 4 du Règlement sur les produits de santé naturels; à la partie 3 du Règlement sur les instruments médicaux, au « *Code of Federal Regulations* » des États-Unis, à la Loi ontarienne de 2004 sur la protection des renseignements personnels sur la santé, de même qu'aux lois et règlements applicables en Ontario. Le CÉR [redacted] est enregistré auprès du *Department of Health and Human Services (DHHS)* et de *l'Office for Human Research Protection (OHRP)* aux États-Unis.

Votre certificat d'approbation éthique valide jusqu'au **13 novembre 2020** couvre ces modifications.

Si vous avez des questions, vous pouvez communiquer avec le bureau d'éthique de la recherche (BÉR) de [redacted]

[redacted]

Président du Comité d'éthique de la recherche — [redacted]