Considerations for Enabling Registered Nurse Prescribing for Home Care Clients in B.C.

Prepared by
Bianca Wallace
University of Victoria

Supervisor
Dr. J. Bart Cunningham
School of Public Administration

Client
Mr. Bruce Ronayne
Executive Director,
BC Office of the Seniors Advocate

This report discusses key elements of an RN prescribing program that would need to be considered for RNs to be able to prescribe in B.C.'s home care practice setting. The report is submitted in partial fulfillment of the requirements for the degree of Master of Public Administration at the University of Victoria.

EXECUTIVE SUMMARY

Introduction

British Columbia has prioritized developing its home and community health services in an effort to reduce hospital based care and support seniors to live at home longer. The resulting shift of clients into home care has led to increased need for access to diagnostic testing and prescribing services outside of the primary and acute care sectors. Registered nurses visiting clients in their homes can often see emerging issues, but are not authorized to prescribe and are unable to initiate certain activities without either a physician's order or existing organizational processes in place, sometimes leading to delays in interventions. Home care clients who do not have timely access to these care services may not have their health concerns diagnosed and treated early enough to prevent an avoidable decline in health or hospitalization. This can have a negative impact on both client care quality and health system costs.

The purpose of this report is to consider the elements of an RN prescribing system that would be needed to enable RNs to prescribe for home care clients in B.C. These elements are identified through a review of other jurisdictions and a newly developed national framework and considered with expert input from key healthcare professionals.

Methodology

This report employs a qualitative methodology. Methods include a review of the international literature and semi-structured interviews with experts working in home care delivery, administration, policy and regulation. Four key elements of an RN prescribing system are used to guide both the literature review and the interviews, including scope of practice, education and oversight, implementation and uptake. The research is also conducted with a focus on the challenges and benefits of enabling RNs to prescribe.

The 17 interview participants represent a variety of healthcare professions, perspectives, and regions across B.C. Their expert input enables existing systems of RN prescribing identified in the literature review to be considered within the current context of RN scope of practice, interprofessional dynamics, and home care operations in B.C. Thematic analysis is used to develop the themes identified in the interviews. Themes that emerge in the interview findings are considered in conjunction with the results of the literature review and presented in the discussion section.

Key Findings

Consideration of RN prescribing as a new component of RN scope of practice is currently taking place in Canada at the national level and in some provincial jurisdictions. The Canadian Nurses Association has developed a *Framework for Registered Nurse Prescribing in Canada* with input from nursing organizations and individual nurses across the country. Alberta is preparing to enable RNs to order diagnostic tests and prescribe Schedule I drugs for stable clients within determined practice settings. Anticipated benefits in these jurisdictions include increasing timely access to care, improving system efficiency and cost effectiveness, and using RNs to their full and optimized scope of practice.

Studies show that these and other benefits to clients and nurses have been realized in jurisdictions that have implemented RN prescribing, such as the United Kingdom and the Netherlands. The health

professionals that participated in this research highlighted the potential to realize these same benefits in B.C. and further anticipated that enabling RNs to order diagnostic tests and prescribe independently of a physician would lead to earlier intervention, reduced hospitalizations, and improved continuity of care for clients.

There are also distinct challenges that can be prepared for based on learnings in other countries and B.C.'s own experience with introducing the nurse practitioner role and other scope of practice changes. There is recognition that RNs pursuing prescribing scope will need specialized education at the post-RN level as well as a set amount of previous home nursing experience to ensure their core competencies are well developed. There are no broadly accepted parameters around what RN prescribing could entail, and different models as well as participant opinions exist on what health conditions and levels of client complexity RNs could be enable to prescribe for, what type of tests and prescriptions could be issued, or if prescribing should occur within the limits of renewing, adjusting, or following a narrow decision support tool. Physician resistance can be anticipated as prescribing has traditionally been solely a medical domain.

Strong support systems will need to be developed for RN prescribers, from initial interest in taking on the role to accessible yet discretionary consulting with nurse practitioners and physicians. Support in the form of mentorship, communication of professional value, and well-developed practice support tools were also seen as key factors in successful implementation and uptake by RNs. Strong regulatory oversight will further establish RNs' professional accountability, while practice reviews and continuing competence requirements will support safe prescribing practices. With adequate preparation to ensure system access, robust prescribing education, and engagement to build physician and stakeholder understanding and acceptance, participants believed these challenges would not become insurmountable barriers.

Conclusions & Further Considerations

The initial exploration conducted in this report generally found cautious to enthusiastic receptiveness to considering how RN prescribing could support home care clients in B.C. Throughout the course of this research it became evident that a thorough, clear, and collaborative engagement process would be essential to developing stakeholder support. Support from employers and other healthcare professionals could underpin RNs' competence and confidence to prescribe. Careful attention to work activities large and small would facilitate smooth system development for RN prescribing, from amending the *Health Professionals Act* and associated regulation, to establishing a means for RNs to communicate their prescribing activities back to other members of the care team.

Future work in this area could begin with defining RN prescribing in B.C., which would provide a common understanding from which stakeholder discussions could begin. It is also suggested that foundational work could include conducting a needs assessment to determine access gaps for home care clients, and research to quantify potential reductions in hospitalizations and health system costs. An assessment of RN readiness to prescribe in home care may also prove a useful avenue for further research. This report indicates that enabling RN prescribing for home care clients could help support a healthier home care population and more efficient service, and merits further, interprofessional consideration.

TABLE OF CONTENTS

EXECUTIVE SUMMARY 2
TABLE OF CONTENTS 4
ACKNOWLEDGEMENTS 6
1. INTRODUCTION 7
1.1 Identifying the Issue 7
1.2 Relevance of the Research 8
1.3 Project Scope and Limitations 10
1.4 Background 10
2. LITERATURE REVIEW 13
2.1 Scope of Practice 14
2.2 Education and Experience 15
2.3 Oversight and Accountability 17
2.4 Implementation and Uptake 17
2.5 Challenges 18
2.6 Benefits 19
3. METHODOLOGY 21
3.1 Research Design 21
3.2 Research Objectives 22
3.3 Sample 22
3.4 Instrument Design 22
3.5 Method of Analysis 23
4. FINDINGS 24
4.1 Scope of Practice Summary 24
4.2 Education and Experience Summary 30
4.3 Oversight and Accountability Summary 32
4.4 Implementation and Uptake Summary 35
4.5 Challenges Summary 39
4.6 Benefits Summary 43
5. DISCUSSION 47

5.1 Scope of Practice 48
5.2 Education and Experience 49
5.3 Oversight and Accountability 50
5.4 Implementation and Uptake 51
5.5 Challenges 52
5.6 Benefits 52
6. CONCLUSION & FURTHER CONSIDERATIONS 53
7. REFERENCES 54
8. APPENDIX 61

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1. INTRODUCTION

1.1 Identifying the Issue

Facing growing pressure on health care resources, jurisdictions in Canada and around the world are re-assessing prescribing's historical place within the medical domain. Governments needing to contain health care costs are increasingly viewing the reallocation of tasks from physicians to registered nurses (RN) as an appropriate policy response (Kroezen et al., 2014). At the same time, RNs' scope of practice is being reviewed to ensure that it reflects their current practice and the needs of their patients. In British Columbia (B.C.), this same pressure on resources is coupled with a strategic priority to shift away from hospital-based care and develop better care services in the home and community (British Columbia Ministry of Health [MOH], 2014). This shift is resulting in both a larger number of clients and higher complexity clients being cared for at home rather than in long term care and acute care settings.

There is now greater need for access to care in the community, yet the main access points to prescribing services remain in the acute and primary care sectors. Research shows many deficiencies in the healthcare system disrupt Canadians' equitable access to primary care, such as long wait times, inconvenience, and being unattached to a primary care provider (Canadian Nurses Association [CNA], 2015). Research from B.C. shows that individuals with chronic illnesses, a common health concern of home care clients, need timely access to care but are less likely to be attached to a regular primary care provider than those individuals without chronic conditions (Crooks, Agarwal, & Harrison, 2012). Without access to a regular primary care provider, unattached clients often end up utilizing walk-in clinics and emergency rooms for basic and preventative health care (ibid).

RNs providing home care must currently receive orders from a physician or nurse practitioner (NP) before diagnostic testing or provision of medications can begin. Since the RN is providing care in the client's home, getting these orders means trying to reach a physician or NP by phone, or recommending the client visit their primary care provider to get the test or medication prescribed directly. If an authorized prescriber cannot be reached, the home care nurse must move to their next appointment, causing a delay that interrupts continuity of care for their current client, especially if the delay occurs on a Friday and the client must then wait for the physician's office hours on Monday.

RNs can also recommend that a client be visited by or go visit n NP – the only nurses that B.C.'s legislation and regulation grant autonomous prescribing authority. NPs were integrated into Canadian emergency departments in part to reduce the significant proportion of patients accessing emergency departments to receive primary care (Thrasher & Purc-Stephenson, 2007). However, NPs do not have sufficient numbers to meet home care clients' prescribing needs as there are only 225 NPs working in direct care in B.C. as of 2014 (Canadian Institute of Health Information [CIHI], 2015), and the majority do not work in the home care setting. Clients receiving care at home may also face physical or cognitive difficulties in visiting their NP or physician, which in addition to appointments generally not being immediately available, can cause delays in accessing the needed care.

These delays mean the condition or concern is often worsening, and the effects can be quite serious. For example, if one health issue frequently seen in home care clients – a urinary tract infection (UTI) – is not diagnosed and treated promptly, the client may start to experience hallucinations, which

jeopardizes balance and increases the risk of fall-related injuries. The client may then end up ultimately receiving the needed prescription and care in the emergency department which is more costly to the health care system (MOH, 2014). Of greater concern, the health crisis may trigger what is known as the "cascade" effect where one issue triggers another and the client's health deteriorates, particularly if they are elderly, and the former quality of life is never regained. The Ministry of Health (2014, p. 32) describes how for frail seniors, an emergency department encounter involves a "battery of testing" and that "the subsequent impact on their overall functioning and resiliency, can affect health outcomes."

Assessment data from two B.C. health authorities shows that in 2014/15, approximately 20% of home care clients, including those receiving home support and other professional services such as rehabilitation, had emergency department encounters and hospital admissions, and 6% had two or more visits in the same year (CIHI, 2015a). While data on the number of hospitalizations or health incidents resulting from delayed access to diagnostic testing and prescribing were either not available or in some cases not permitted for public release in this report, the anecdotal evidence offers a wealth of stories related to both minor and critical issues. The CNA (2015) also notes that many people using emergency departments are not using them for emergency or even urgent health concerns, and RNs in the community could safely diagnose and treat these clients instead.

Preventing and interrupting health exacerbations and the cascade effect requires a fairly responsive, comprehensive and interdisciplinary approach, to which RN prescribing could have the potential to contribute significantly. RNs tend to see their clients on a regular schedule and can often identify symptoms requiring testing and prescriptions as they emerge, giving them the potential to undertake a greater role in preventing the escalation of commonly prescribed-for conditions. Internationally, providing greater and timelier access to medications through RN prescribing has proven benefits for clients, providers, and system efficiency, not least through effective distribution of tasks between health care providers. The CNA (2015) has identified home care as one of the first health settings in which RN prescribing should be deployed in Canada. Given the health system pressures, the potential benefits, and the increasing national and international support, it is highly relevant for enabling RN prescribing to be considered for home care clients in B.C.

This report discusses what enabling RN prescribing for home care clients could look like in B.C. Elements of an RN prescribing system adapted from the CNA framework provide structure for the literature review, findings and discussion sections. Following the background provided, Section 2 presents a literature review including current academic and professional thinking from Canada and jurisdictions that have already implemented, or are in the process of implementing, RN prescribing. Section 3 discusses the interview and analysis methodology used, while Section 4 presents the findings of the interviews. Discussion of the findings and conclusions are presented in Sections 4 and 5.

1.2 Relevance of the Research

Based on the literature review and interviews conducted for this project, research has not yet been conducted on enabling RNs to prescribe specifically in the B.C. context, nor specifically for home nursing clients in other jurisdictions. There is a need to understand the role RN prescribing could play in terms of improved health and system efficiency, including considerations regarding scope of practice, education development, accountability, and implementation. Consideration of these elements of RN

prescribing involves developing an understanding of the current expert opinions of frontline nurses, administrators, and policymakers, situated in the context of RN prescribing evidence from relevant jurisdictions. This report seeks to illustrate current considerations regarding RN prescribing as guided by the elements of a national framework, drawing on international evidence placed within B.C.'s strategic context, and responsive to the fundamental interests of home nursing clients.

Professional nursing associations and regulatory colleges across Canada are considering the potential of RN prescribing. In April 2015, the Canadian Nurses Association (CNA) published a Framework for Registered Nurse Prescribing in Canada which reviews the international literature on RN prescribing, presents the progress toward RN prescribing by province (summarized in Table 1 below), and presents a guide to developing RN prescribing in Canada with an emphasis on taking a national approach. The Framework includes a review of the benefits realized by other countries where RN prescribing is in place and suggests that these same benefits could be achieved in the Canadian context. As the Framework represents a culmination of interest and collaboration across the country, the time seems right to employ this Framework in the consideration of RN prescribing in B.C.

Table 1: Summary of RN Prescribing Activities across Canada (CNA, 2015, p. 26)

Jurisdiction	Status of RN Prescribing Activities
Alberta	Standards for RN prescribing are being developed and finalized by the college. RN prescribing will be enabled in specific practice settings for certain client populations and needs.
British Columbia	B.C. is on the leading edge of certified practice, although it does not entail prescribing authority.
Manitoba	Manitoba's nursing college is developing an "RN authorized prescriber" role to be introduced in specific specialties and practice settings.
Newfoundland and Labrador	RNs are able to provide (but not prescribe) selected medications to clients in specific situations with authorization from their employer.
Quebec	RN prescribing is currently being implemented for specific client needs and situations.
Saskatchewan	Implementation of "additional authorized practice" similar to B.C.'s certified practice is in progress.
New Brunswick, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Yukon	RN prescribing is not in place.

RN prescribing is also relevant in the context of B.C.'s current strategic priorities and ongoing overarching goals. RN prescribing is a potential avenue to pursue B.C.'s health sector priority of developing better supports for clients in the community and outside of the hospital, as well as its call for an "accessible, responsive, evidence-informed, and sustainable drug program (MOH, 2014, p.31). The reported benefits of RN prescribing align will all three of the overall *Triple Aim* goals, as developed by the Institute for Healthcare Improvement (2016) and adopted in B.C.:

- Improve the health of populations
- Improve the patient experience of care (including quality and satisfaction)

- Reducing the per capita cost of health by focusing on quality and the efficiency of health care delivery

B.C. has added to the second aim a parallel need to improve health providers' experience of delivering care (MOH, 2015b). RN prescribing for home care clients in B.C. could have the potential to support both this strategic objective and each component of the Triple Aim.

In the spring of 2014, B.C. also became the first province in Canada to appoint a Seniors Advocate with the mandate to review systemic issues facing seniors across the province and make recommendations to government and providers on improvements to these services. The impetus for this research came from seniors' interest and concern in being able to live independently at home for as long as possible, a desire repeatedly heard during the Seniors Advocate's travels around the province. These consultations led to the beginnings of a broad review of B.C.'s home and community care program which will continue to occur in stages over the next several years. Within this broad review, RN prescribing may be considered as one of a number of potential pathways to better supporting seniors to age in place.

1.3 Project Scope and Limitations

RNs practise in many different settings in addition to home care, such as hospitals and primary care clinics, and serve many different populations, such as pediatrics or mental health. While there may be benefit to having RN prescribers in other settings, this research focuses on RN prescribing in the home care practice setting. The scope of this project entails publicly funded home care, whether delivered directly by health authorities or through their contracted providers, but does not encompass or address private home care services. This research is meant to discuss *considerations for enabling* RN prescribing in B.C., and is neither an evaluation of whether B.C. should or should not grant RNs prescribing authority, nor a cost-benefit analysis of doing so.

1.4 Background

Home Nursing Overview. Home care nursing is a component of B.C.'s publicly funded home and community care program that is delivered by regional health authorities. Home nursing provides assessment, education, and medical services to people with a variety of ongoing health needs, or short-term needs following discharge from hospital. Home nursing services include wound care, management of medications, chronic disease management, palliative care and post-surgical care. Part of the nursing role is to educate clients and their family on their health needs and how to manage their own care (B.C., 2016a). Home nursing visits are available seven days a week and can be provided temporarily or indefinitely depending on the client's assessed needs. In 2014, there were approximately 1,235 RNs providing direct care in B.C.'s home care sector (CIHI, 2015b).

In the 2013/14 fiscal year, 52,961 people in B.C. received home nursing services. These services were delivered in 816,043 visits to clients' homes. The number of clients and visits are both increasing, however the number of clients is far outpacing the number of visits being delivered. Since 2009/10 the number of home nursing clients has increased by 21%, while the number of visits delivered has increased by 3.3%. Seniors aged 65 and over are the primary recipients of home nursing, accounting for 65% of clients and 66% of visits in 2013/14 respectively (MOH, 2015a).

B.C.'s Strategic Context. In a recent study, one B.C. health authority noted that like other health organizations, it is facing a struggle with B.C.'s growing population, increased pressure around healthcare costs, and a need to ensure that the spectrum of human resources are used strategically and effectively (Meadows & Prociuk, 2012). In its guiding strategic document *Setting Priorities for the B.C. Health System*, the Ministry of Health (2014) discusses how B.C.'s hospitals cannot sustain current levels of utilization, and that other delivery systems can better meet the needs of key populations, including seniors living in the community. The ministry has recognized that receiving care at home is both the preference of seniors and an effective form of care that reduces health system costs overall (ibid). In a recent policy paper, the Ministry of Health (2015, p. 5) acknowledged that "current service configurations of primary and community care services are often unable to proactively respond to the changing needs of individual patients contributing to the need for hospitalizations." As a result, the ministry is moving toward health care policy that emphasizes providing adequate and cost-effective in-home and community-based care in order to slow seniors' progression towards frailty, and reduce or delay hospitalizations and residential care placements where possible and appropriate (MOH, 2014).

Legislation and Regulation in B.C. Nursing has been a regulated profession under legislation in B.C. since 1918. RNs were regulated under the *Nurses (Registered) Act* until 2005. In 2005, RNs were brought under the *Health Professions Act* (HPA), the umbrella legislative framework that replaced individual profession-specific statutes for most regulated health professions. Under the HPA, RN practice became an independent practice, shifting away from providing services under delegated authority. At the same time, NPs became a recognized category of registered nurse, and the College of Registered Nurses of BC (CRNBC) was established as the new regulatory body, replacing and dissolving the Registered Nurses Association of BC (MOH, 2016a; 2016b).

As a designated health profession under the Act, RNs are regulated by the HPA, the Nurses (Registered) and Nurse Practitioners Regulation (the Regulation), and CRNBC's bylaws. The Regulation sets out RNs' reserved title and scope of practice. Under this structure, the ministry may legislate that RNs are legally allowed to perform a certain task, CRNBC could impose a limitation on the task such as requiring specialized training to be undertaken before RNs can perform it, and the employer (the health authority or contracted agency) could decide whether or not that task is something they will include in their services (B.C., 2016b).

CRNBC's Role. CRNBC and other health profession colleges are established to protect the public and ensure public safety. CRNBC carries out this responsibility by establishing the requirements for registration in the RN profession, developing continuing competence and quality assurance, and providing professional conduct review and discipline where necessary, all of which are set out in the CRNBC bylaws. Standards of practice and professional ethics are also the domain of CRNBC. CRNBC is itself governed by the Health Professions Review Board, established under part 4.2 of the HPA, an independent tribunal that can review CRNBC's registration decisions and investigations into complaints against registrants (CRNBC, 2016b).

Scope of Practice Changes. In late 2012, the B.C. Ministry of Health implemented a new health professions regulatory model to reform scope of practice, a change that had been under development since 2006. Prior to 2012, the HPA and its regulation included the concept of professional exclusivity, whereby legislation prohibited certain services or procedures from being performed by any person

other than a member of the authorized profession, unless another profession was also authorized to perform them under the legislation. The new regulatory model that came into effect in 2012 did away with professional exclusivity and instead instituted a system based on two elements: scope of practice statements and restricted activities (B.C., 2016c).

Scope of practice statements describe each regulated profession's activities and areas of practice in broad, non-exclusive and non-exhaustive terms. The restricted activities, formerly called reserved acts) are a precise list of higher risk, invasive activities that cannot be performed by any health service provider except those regulated professions specifically granted authority to do so in their regulations, based on their education and competence. The restricted activities also allow for unregulated persons to be delegated the authority to perform the restricted activity by an authorized regulated professional. Combined, these two elements allow for an overlap between regulated professions' scope of practice, and also with that of unregulated persons authorized or delegated restricted activities. The effect of this regulatory model change was enhanced multidisciplinary and interprofessional practice with a continued focus on protection of the public and patient safety (B.C., 2016c).

Authority to Prescribe. The HPA is the legal source of authorization for prescribing activities. The HPA authorizes specific practitioners to prescribe within their scope, such as physicians, NPs, dentists, midwives and pharmacists. For example, pharmacists are authorized to conduct a number of activities in the sphere of prescribing including, in specific circumstances, the ability to dispense an interchangeable drug, renew a prescription, or dispense a drug or device contrary to the terms of a prescription. Under the HPA, RNs do not currently have authority to prescribe. RNs with certified practice – RN(C) – have a greater scope and are discussed later.

Under the Regulation, RNs can make a nursing diagnosis that identifies a condition, but not a disease or disorder, as causing signs or symptoms displayed by a client, without requiring an order from another health professional. An order is an authorization or instruction for a specific client given by an authorized health professional to carry out an activity listed as restricted in Section 7 of the Regulation. A nursing diagnosis is a clinical decision made so the RN can determine if she can improve or resolve the condition. RNs must involve another health professional to obtain a diagnosis of the disease underlying the condition (CRNBC, 2016c).

Relevant to the home care population, the Regulation permits RNs to compound, dispense or administer medications in B.C.'s Schedule II drug schedule. The CRNBC (2016c; p. 24) places limits and conditions on the regulation, such as that:

> *Registered nurses only compound, dispense or administer Schedule II medications without an order to treat a condition following an assessment and nursing diagnosis. Registered nurses require an order before compounding, dispensing or administering Schedule II medications to treat a disease or disorder.*

RNs can carry out insulin dose adjustment if it is within their competency and they follow the appropriate decision support tools (DSTs). The Regulation also allows RNs to treat a specific list of emergencies and the influenza without an order by compounding, dispensing or administering a limited number of Schedule I medications, such as providing epinephrine to treat anaphylaxis. RNs must complete additional education and employ the appropriate DST in order to be able to compound, dispense or administer antivirals to treat flu-like symptoms. RNs compound, dispense or administer

Schedule I medications (drugs that require prescription such as antibiotics) and Schedule IA medications (controlled drugs such as morphine) with an order (CRNBC, 2016c).

In B.C., RNs who take additional education and are certified by CRNBC use the title Registered Nurse (Certified), or RN(C). There are currently three categories of certified practice: remote nursing practice, reproductive health, and RN First Call. RN(C)s are not authorized to carry out the restricted activity of prescribing, but they do independently perform some restricted activities without the normally required order, such as administer, compound, and dispense Schedule I medications. In some cases, certified practice includes being able to diagnose a disease or disorder (in addition to a condition) and provide treatment with prescription medications following CRNBC-approved DSTs. Any medications an RN or an RN(C) administers or dispenses must be provided by their employer. RNs with certified practice cannot prescribe; NPs are the only nurses who can prescribe in B.C (CRNBC, 2016a).

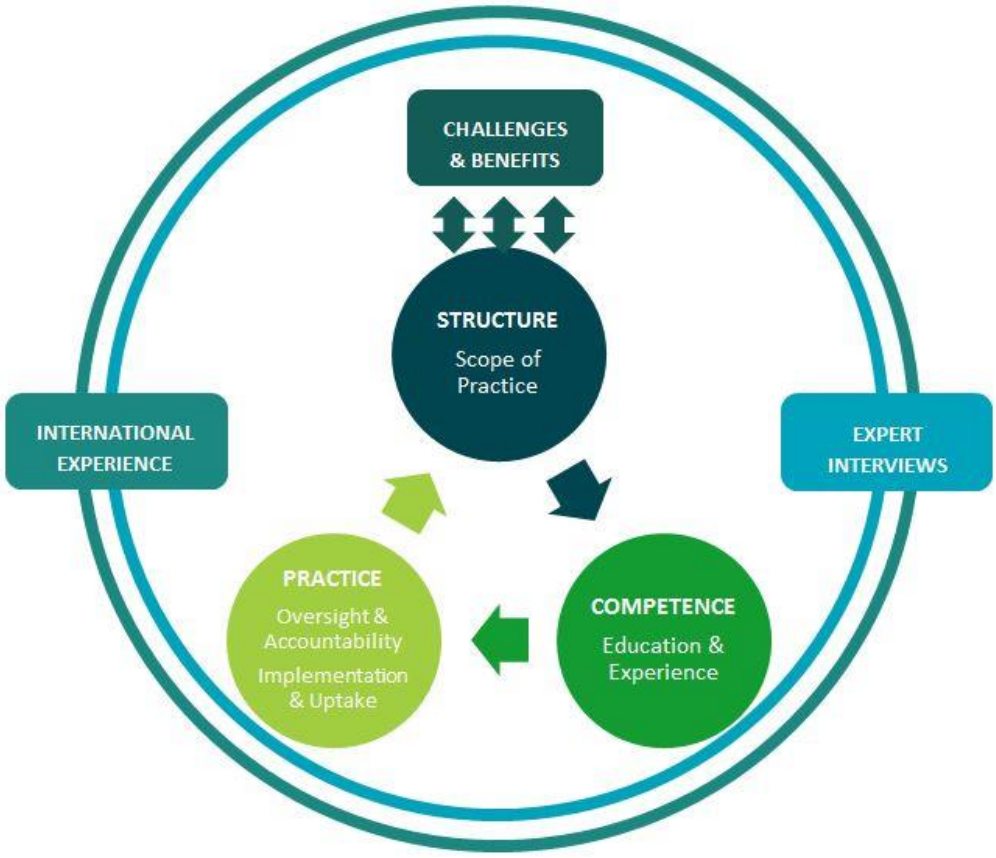
The College and Association of Registered Nurses of Alberta (CARNA) is developing a role similar to certified practice, and in 2015 released a draft framework document, *RN Prescribing and Ordering Diagnostic Tests: Requirements and Standards* (CARNA, date TBD). The RN prescribing role will be similar to certified practice in B.C., including in the use of clinical support tools. Regulation will establish the authority to prescribe Schedule 1 drugs (CARNA, date TBD). However, in Alberta the term "prescribing" will be used and RN prescribers will be able to practise within whatever their specific clinical practice area is, rather than being the authority being limited to a set of pre-determined practice areas. CARNA's draft standards indicate the Alberta model will be similar to that in place in the U.K. in the areas of education, prescribing requirements, and authority (MacKenzie, 2012).

2. LITERATURE REVIEW

The literature review is guided by the key components of an RN prescribing system described in the CNA's *Framework for RN Prescribing in Canada*: structure, competence, and practice. In this report, these components have been adapted into the following areas: scope of practice (structure), education and experience (competence), oversight and accountability (practice), and implementation and uptake (practice). As Figure 1 illustrates, these components feed into each other, with challenges and benefits that run throughout the system. The literature review is structured into sections for each component, the challenges, and the benefits.

Within the structure component, scope of practice is the main element. Scope of practice is defined by the legislation and registration, in this report presented in the background section. It includes the level of practice at which authority to prescribe is granted, the needs to be prescribed for, and the parameters on RN prescribing. Within the competence component, the main element is education and experience. This element is where the knowledge, skills, and judgement are developed for safe RN prescribing. The two main elements within the practice setting are oversight and accountability, and implementation and uptake. This is where consideration is given to day-to-day clinical practice, support and supervision structures and tools, and implementation and operational processes.

Figure 1: Key areas guiding consideration of RN prescribing in B.C.



2.1 Scope of Practice

The number of countries in which nurses can legally prescribe medication has increased considerably over the last two decades (Kroezen et al., 2014). Nurse prescribing, at a variety of levels, is either in place or under consideration in a number of other jurisdictions, including the United Kingdom (U.K.) Australia, New Zealand, Ireland, Sweden, Brazil, South Africa, the United States, Spain, and the Netherlands (Courtenay, Carey, & Burke, 2007a; Lim, Courtenay, & Fleming, 2013; Kroezen, Dijk, Groenewegen, & Francke, 2012). Kroezen et al. (2012) describe three nurse prescribing models arising in the international literature: independent, supplementary, and community practitioner nurse prescribing.

These models are primarily formed around the regulated relationship the nurse has to a medical prescriber. Independent nurse prescribing is similar to the NP role in Canada, as independent prescribers also clinically assess, diagnose and prescribe for clients, from either a limited or open formulary. Both consult with other prescribers at their discretion. In the supplementary model, a nurse partners with an independent prescriber, most often a physician, who makes the initial assessment and diagnosis. The nurse can then prescribe without supervision but with collaboration and consultation

with the physician (Kroezen et al., 2012). The third model is found in the U.K. – community practitioner nurse prescribing – and allows nurses working in the community to prescribe independently but from a specific formulary. The use of group protocols (similar to DSTs), clinical management plans, or collaborative practice agreements are restrictions that create variations in nurse prescribing systems (Kroezen et al., 2012). NPs in Canada are independent prescribers and are not required to follow DSTs.

The RN prescribing model being developed in Alberta will require the use of clinical support tools, will include ordering diagnostic tests, and will only be within scope for clients whose health care needs are stable. Clients with comorbidities and complex health care needs should have their prescribing decisions made by NPs or physicians. Home care is specifically identified as a practice setting where RN prescribing will be authorized to occur (CARNA, date TBD).

The International Council of Nurses (ICN) describes nursing scope of practice as dynamic and needing periodic review to ensure it is responsive to changing health needs and effectively supporting improved health outcomes (ICN, 2013). The CNA (2013) has identified the opportunity to review RNs' scope to include prescribing, as a way to advance RNs' scope of practice to improve care delivery in Canada. However, there is no consensus on how the term "prescribing" is used, nor consensus around a definition of RN prescribing (Kroezen, Dijk, Groenewegen, & Francke, 2011; Kroezen et al., 2012; Jones, 2009; CNA, 2015). The CNA (2015) advocates that the legal wording used to define RN prescribing must be kept broad, rather than being approached from a focus on restriction and control, and must allow room for progression in the regulation without requiring further legislative amendment as client needs in relation to RN prescribing evolve. The CNA's model for RN prescribing in Canada proposes the following scope of practice:

> RN prescribers possess and demonstrate the competencies to use clinical decision tools to:
>
> - deliver diagnosis of an identified range of health conditions;
> - order and interpret a limited range of diagnostic tests;
> - prescribe and dispense a limited range of pharmaceuticals; and
> - perform specific procedures within their legislated scope of practice (CNA, 2015, p. 6).

In the U.K., RN prescribing was introduced in 1992 and developed into nurse independent prescribing and nurse supplementary prescribing in the early 2000s (Courtenay & Carey, 2008a). As of 2013, non-medical health care professionals with prescribing qualification in the U.K. numbered over 50,000 (Lim, et al., 2013). Qualified RN prescribers are now authorized to prescribe any licensed medication, including certain controlled drugs, for any health condition as long as it is within their area of practice (Courtenay, Carey, & Burke, 2007b). Latter and Blenkinsopp (2011) note that nurse prescribers work with patients in a variety of clinic settings, including 20.9% who work in patients' homes. The most frequent area of nurse prescribing was infections, at 15.3%, with other areas such as diabetes (7.9%) and chronic obstructive pulmonary disease (6.1%) included in the top five. In the Netherlands, RNs with a bachelor degree who practise in diabetes, lung care and oncology are able to issue prescriptions for a limited set of medicines within standards and protocols, similar to certified practice in B.C., but the diagnosis itself must be made by a physician (Kroezen et al., 2014).

2.2 Education and Experience

The CNA advocates that the prerequisite level of education for RNs pursuing further prescribing

education be a baccalaureate nursing degree or higher. In B.C., all entry-level RN programs are baccalaureate degree programs, a change instituted in 2005 when all nursing diploma programs were phased out (Meadows & Prociuk, 2012).Those RNs with diplomas were grandfathered in, and still represented approximately 47% of B.C.'s RN workforce as of 2014 (CIHI, 2015b). Half of B.C.'s RNs have baccalaureate education, while the remaining 3% have education at the master's or doctorate level (ibid). CRNBC (2013) acknowledges that RNs will graduate with varying levels of experience in different practice settings and with different populations, and that time and experience are required to consolidate nursing practice knowledge and judgment.

The ICN recommends that the prerequisites for nurse prescribing should include specialized knowledge and clinical experience (Martiniano, Coêlho, Latter, & da Costa Uchôa, 2014). The CNA (2015) further advocates that, as is the requirement for independent RN prescribers in Ireland and the U.K., the level of previous clinical experience should be the full-time equivalent of three years' practice within the last five years before the RN applies to the program. One of these years must be within the practice setting within which they will be prescribing (Courtenay & Carey, 2008b).

RN prescribing education varies in extent and delivery between countries. In Sweden it is part of a specialist nursing program, in the Netherlands education is a university level pharmacotherapy module, in Spain prescribing can be taken either within the regular four-year nursing degree or as part of a specialization program at the postgraduate level. In some cases, such as in Finland and the U.K., prescribing courses can be taken on a stand-alone basis at the bachelor or master's level, and a minimum amount of clinical experience is required (Kroezen et al., 2012). In the U.K., the education for RNs to become prescribers is the same for both the supplementary and independent levels (Courtenay et al., 2007a).

Kroezen et al. (2012) summarize prescribing education programs for Western European and Anglo-Saxon countries, noting there is similarity in content between countries regardless of level of training or whether the education is delivered as a stand-alone piece. Prescribing education usually includes pharmacology, diagnosis and clinical decision making, medical treatment adherence, legal, regulatory and ethical aspects, professional responsibility and accountability, and prescribing within a team environment. A practical component is common to all but a few jurisdictions. Meadows and Prociuk (2012) note that it is a common view that preceptorship or orientations is beneficial to all clinicians new to the home care nursing environment, regardless of their level of experience.

Research reviewing current RN prescribing education programs has shown these programs adequately prepare RN prescribers for their roles (Latter et al., 2007; Latter, Maben, Myall, & Young, 2011). This includes relatively short education programs, such as the U.K.'s 26-day course with a 12-day supervised clinical component (Latter et al., 2011). Prescribing education can also increase RN prescribers' confidence levels, prepare them to challenge medication orders from other prescribers, and earn increased physician respect (Bradley & Nolan, 2007). Bradley and Nolan (2007) also describe mentorship and teaching from a physician as an essential component of education for nurse prescribers in many countries.

Studies have shown that nurse prescribers recognize a need for protected time for further learning and opportunities for ongoing professional development in order to consolidate the knowledge they have acquired to support their prescribing activities (Nuttall, 2007). It is also important for prescribers to

undertake professional development on a regular basis to ensure they remain abreast of evolving prescribing trends (Green, Westwood, Smith, Peniston-Bird, & Holloway, 2009). Green et al. (ibid) further identify physical and diagnostic skills as areas non-medical prescribers in the U.K. see as essential for continuing development. Carey and Courtenay (2010) identify pharmacological knowledge as the greatest area of knowledge needs, both when RN prescribers are initially educated and for continuing professional development. On this evidence base, the CNA (2015) advocates that minimum requirements for continuing competence should be established, including number of practice hours conducting prescribing activities, number of continuing professional development hours, and reflective self-review of practice.

Taking a multidisciplinary approach that involves medical prescribers and physicians has been emphasized as important for effective continuing professional development (Jones, 2009). RN prescriber collaboration with other healthcare providers also serves the purpose of providing support and ongoing learning that can help RNs develop confidence and improved prescribing skills (Stenner, Carey, & Courtenay, 2009).

2.3 Oversight and Accountability

RNs are fundamentally accountable for their practice, and responsible for knowing and only acting within their scope and competencies. In its framework, the CNA asserts that "RN prescribing will take place in the context of professional and individual competence (including an RN's knowledge, experience, skills and judgment) and the legislated scope of practice" as established by jurisdiction (2015, p. 5). To further establish effective oversight and governance structures, the CNA (2015) recommends that employers and sites adopting RN prescribing must establish reliable access to meaningful consultation processes with medical and non-medical prescribers as well as other interdisciplinary professionals included in the care team.

Supervision, oversight and some form of practice reviews must be part of the structure of RN prescribing, however the CNA notes that little evidence exists regarding the domains of practice- and organization-related conditions. Yet for RN prescribers to successfully integrate into interdisciplinary healthcare settings, educational and regulatory structures must be strong and the clinical infrastructure must be well developed (CNA, 2015). Clinical supervision on a regular basis and formalizing support structures are also critical components of meeting RN prescribers' ongoing learning needs (Stenner & Courtenay, 2008). Citing personal communication with a U.K. based RN prescribing researcher, the CNA describes how in the U.K., physicians are required to provide mentorship to student prescribers during 12 days of work experience in a practice setting, following which the physician must sign off on the competencies of their students (CNA, personal communication with M. Courtenay, 2015). They further describe how this removes physicians as a potential barrier to the prescribing role, as physicians grow to understand and be reassured by RNs' prescribing abilities.

2.4 Implementation and Uptake

A number of studies have outlined barriers to both becoming a prescriber and to acting as a prescriber once authorized to prescribe. Barriers to becoming a nurse prescriber include a lack of time as a result of heavy workload and getting study leave covered adequately (Ziegler, Bennett, Blenkinsopp, &

Coppock, 2015). In their Ontario-based research to help health care providers prepare strategies to integrate NPs found that the main barriers to uptake of new roles were lack of knowledge of the role, insufficient mentorship, and a lack support from physicians and administration (van Soeren & Micevski, 2001). Objections by physicians or other healthcare providers and a lack of peer support were also found to hamper nurse prescribing in the U.K. (Courtenay & Carey, 2009).

In Brazil, studies have shown that fear and insecurity in prescribing are a barrier for nurses as is the fear of complaints (Martiniano et al., 2014). The authors suggest that this may in part be due to the fact that nurses in Brazil can prescribe without any required prescribing training if they meet criteria for specialized knowledge, clinical experience, and registration. A recent U.K. study noted two key barriers that impede nurse prescribing, including a lack of infrastructure such as computers to generate prescriptions, and insufficient continuing professional development. Professional development was limited by a lack of organizational strategic input and funding, as well as manager support for study, particularly by providing staff coverage and time away (Lim et al., 2013). These findings build upon earlier studies outlining these barriers, including organizational arrangements, such as budget provisions and dispensation of prescription pads, and insufficient access to professional development (Carey, Courtenay, & Burke, 2007; Courtenay et al. 2007a)

As described by the CNA (2015), early engagement of physicians to identify and address potential barriers as well as enablers of RN prescribing in an interdisciplinary setting is crucial, and must come during the consideration phase. Receiving support from other healthcare professionals is critical to RN prescribing being successful (Bradley & Nolan, 2007). In a study of Fraser Health Authority's integration of licensed practical nurses into the home care setting, the authors found that effective mentorship and support throughout the role adjustments increased satisfaction with home care for both RN and LPNs (Meadows & Prociuk, 2012). Latter and Blenkinsopp (2011) note that a strategic approach must be taken to understand and authorize prescribing across medical and non-medical health care providers in order to maximize the efficient use of time and resources.

In the U.K., nurses' are motivated to undertake prescribing training because they see it as a means to improve patient care, advance their practice, and work autonomously (Bradley, Cambpell, & Nolan, 2005). A survey of nurses who care for patients with skin conditions found that specialist training – in this case in dermatology – was a factor in the extent to which nurses practised prescribing (Carey, Courtenay, & Stenner, 2013). Nurses who had taken specialist training prescribed more items per week, had the widest range of products they prescribed, and used their qualification in more ways than those nurses without specialist training (ibid). RN prescribers' level of confidence can be increased by providing accessible continuing professional development that helps support and maintain their continuing competence (Courtenay et al., 2007b). Research also shows that providing ongoing clinical supervision and formal structures for support is critical for RN prescribers to meet their ongoing learning needs (Stenner & Courtenay, 2008).

2.5 Challenges

The challenge most frequently arising in the literature is that of physician resistance and lack of support (CNA, 2015; Kroezen et al., 2012; Ben-Natan, 2015). Kroezen et al. (2012) describe how the introduction of RN prescribing causes a re-division of long-established jurisdiction between the medical and nursing

professions, potentially triggering interprofessional competition over the task of prescribing. Ben-Natan (2015) echoes this, describing that the need to renegotiate professional boundaries as RNs take on a new role can cause interprofessional conflicts to arise, but that a stepped and gradual approach can help to mitigate the risk of conflict.

Support and cooperation from physicians and other healthcare professionals is a crucial factor in the success of RN prescribing (Bradley & Nolan, 2007). Research shows that physicians at both the individual practitioner and organizational level have concerns about patient safety in nurse prescribing, and even if agreement in principle to the role of RN prescribing can be found, there is still disagreement between physicians on how to implement the role (Jones, Edwards, & While, 2011). A review of B.C.'s utilization of NPs found that NPs still face barriers to practice in the form of physician attitudes, lack of leadership from government, unclear role scope, and issues around payment models (Wong & Farrally, 2014). Initial forays into RN prescribing in Canada have encountered some resistance as well, in the form of pushback from the medical profession in particular (CNA, 2015).

Ensuring RNs feel adequately prepared and confident to prescribe is another challenge. Findings from a U.K. study in the palliative care sector released in 2015 showed that 36% of nurse prescribers lacked confidence in prescribing, 14% feared making a prescribing error, 14% felt they did not get adequate general practitioner support, and 14% reported a lack of support from peers or management (Ziegler et al., 2015). Another U.K. study looking at the current and future contributions of nurse prescribers noted that 58% of nurse prescribers were concerned with prescribing for clients who have co-morbidities, and that this may be a growing issue as co-morbidities are increasing as more people live longer with multiple ongoing health conditions (Latter & Blenkinsopp, 2011). Chronic conditions, frailty, cognitive impairment, comorbidities and polypharmacy are common in home care clients (Woodward, Abelson, Tedford, & Hutchison, 2004). The polypharmacy often seen in older adults where multiple diseases and conditions are at play can put the client at increased risk of an adverse event leading to hospitalization (Doran et al., 2013).

2.6 Benefits

A number of studies show a wide range of benefits that arise from nurse prescribing. These include better access to health care, safe and competent practice that improves patients' quality of care, improved nurse capacity and recognition for their professional abilities, and improved interprofessional team healthcare delivery (Latter & Blenkinsopp, 2011; Kroezen et al., 2011; Bhanbhro, Drennan, Grant & Harris, 2011). The patient perspective shows an appreciation for the holistic care nurse prescribers provide, as well as the continuity of care and comprehensive information received (Courtenay, Carey, & Stenner, 2011a; Courtenay, Carey, Stenner, Lawton & Peters, 2011b).

Access to health care has been identified as a key determinant of health, in combination with genetics, environment, and lifestyle (Wilkinson & Marmot, 2003). Availability of care in the community is one component of the concept of access (Joseph & Phillips, 1984). A recent B.C. study showed that access to health care, through the provision of appropriate health services at the right time and in the right place, promotes health and well-being in elderly populations (Allan, Funk, Reid, & Cloutier-Fisher, 2011). In remote areas that have limited availability of health care services, home care can provide access to care that acts as a 'safety net' (ibid).

RN prescribing has been introduced in countries around the world to achieve a number of benefits related to client benefits and health system resource management. In their survey of Western European and Anglo-Saxon jurisdictions, Kroezen et al. (2014, p. 1006) found jurisdictions achieved a number of objectives through authorizing RN prescribing, listed here beginning with most frequently mentioned:

- To improve the quality of care
- As a solution to workforce shortages within the health care service
- To offer patients quicker/more efficient access to medicines
- To make better use of nurses' skills
- To meet the medication needs of patients living in remote geographical areas
- To increase the cost-effectiveness of the health care system
- To improve patient choice
- To modernize the health care system
- To increase team working within the health care service
- To legalize standing prescribing practices by nurses (i.e. where a doctor rubber-stamps a prescribing decision taken by a nurse)
- To reduce the workload of doctors and physicians
- To improve patients' compliance with drug regimens

Other studies reiterate that benefits sought include making the most efficient use of limited health care resources, reduce health care expenditures (Van Ruth, Mistiaen, & Francke, 2008), counteract physician shortage, and provide better health care coverage in remote areas (Kroezen et al., 2011). In the U.K. specifically, RN prescribing was implemented to improve access to care and medications for clients, use healthcare human resources more effectively, and increase care choices for clients (United Kingdom Department of Health, 2006).

Evaluation of RN prescribing in the U.K. has indicated that the many predicted benefits of RN prescribing have been achieved, as well as additional benefits that were unanticipated by the government (Courtenay, 2010). The same literature shows community practitioners who prescribe have reported benefits in the form of convenience and time saving, increased satisfaction, autonomy, and status, and a sense that better information about prescriptions is being provided to clients (ibid). A systematic review of the effects of nurse prescribing showed benefits including increased nurse autonomy, better use of nurses' skills, and savings in time for both clients and physicians (Gielen, Dekker, Francke, Mistiaen, & Kroezen, 2014). There is also evidence that physicians perceive benefits to RN prescribing, including decreased workload and fewer interruptions to sign a prescription (Avery, Savelyich, & Wright, 2004). RN prescribing may also allow NPs and physicians to focus on more complex cases and clients with new diagnoses (MacKenzie, 2012).

In a comprehensive international review, Kroezen et al. (2014) concluded that concerns regarding nurses' competence to prescribe seem to be unfounded, and there is evidence that nurses prescribe in ways that are comparable to physician prescribing in course of action and quality. The authors also found that patients may be even more satisfied with RN prescribing and receive more care time and information than with traditional physician prescribing (ibid). A recent analysis of systematic reviews conducted in the last 35 years found that extensive and strong evidence exists that nurse prescribing at the NP level is of equivalent quality to physician prescribing, that it is safe and competent, and that NPs are well-accepted by their patients (Wong & Farrally, 2014).

In a recent survey of 70 Canadian RNs working with diabetes patients in primary care, 85% of respondents thought RN prescribing for diabetes patients would increase access to care and medication prescriptions. (MacKenzie, 2012). Benefits to RNs were also anticipated, as was increased patient compliance and satisfaction with care (ibid). These survey results reflected the value and benefits identified in the U.K., including improved medication compliance and satisfaction resulting from non-medical interaction between patient and RN, and increased patient experience in decision making (Drennan et al., 2010; Courtenay et al., 2011b), and improved access to and quality of care resulting from improved use of nursing skills (Courtenay & Carey, 2008c). Similar effectiveness and benefits of nurse prescribing could be expected of RN prescribing in B.C. (MacKenzie, 2012). MacKenzie (2012) found 74% of survey respondents were "ready" to prescribe for diabetes clients, as determined by high levels of perceived value of RN prescribing, confidence in clinical skills and abilities, and willingness to complete the educational requirements.

In *Registered Nurses: Stepping Up to Transform Health Care*, the CNA identified autonomous RN prescribing as a key next step in transforming health care by utilizing RNs to their full potential. Expected benefits cited include decreased waiting times, improved efficiencies in health care, and reduced healthcare delivery costs (CNA, 2013). In Alberta, RN prescribing is intended to optimize RNs' scope of practice and encourage innovative practice models to be developed across a range of practice settings (CARNA, date TBD). Expected benefits include supporting access to care, improved system efficiency, and increased cost effectiveness (ibid).

3. METHODOLOGY

3.1 Research Design

Two streams of research were conducted for this report. The first was a literature review of the academic and grey literature on nurse prescribing. The review encompassed literature from British Columbia and other Canadian jurisdictions, as well as the larger body of work from other countries that have already introduced or are in the process of introducing nurse prescribing. It focused on the elements of RN prescribing developed in the literature review, including benefits, scope of practice, education, oversight and accountability, and implementation and uptake.

The second stream of research involved conducting semi-structured expert interviews to gather primary research from 17 respondents. According to Mason (2002), a core feature of a semi-structured interview is that it is topic-centred, with themes or issues the researcher wishes to cover but through a structure that is flexible and fluid. The semi-structured interview allows the interviewer to ask probes or pursue lines of discussion raised by the interviewee, instead of needing to adhere to the exact order and wording of a structured interview, while still allowing comparison across interviewees (Edwards & Holland, 2013). The questions were designed to allow interviewees the flexibility to raise other themes that occurred to them during the interview, while still ensuring each element of RN prescribing of interest to the researcher was covered by the conclusion of the interview.

An additional motivation for using semi-structured interviews was that "the interviewer can become more adept at interviewing, in terms of the strategies which are appropriate for eliciting responses

(Holland and Ramazanoglu, 1994, p. 135)." This approach allowed the interviews to become learning events that improved the quality of the interactional exchange.

3.2 Research Objectives

The purpose of this study is to explore the elements of RN prescribing that would need to be considered if RN prescribing were introduced in British Columbia, and the perspectives of current professionals on the design of those elements. The following objectives support the purpose of this research:

1. To identify and explore the key elements of an RN prescribing program.
2. To understand key stakeholders' perspectives on what those elements could look like in B.C. as well as the benefits and challenges of enabling RN prescribing.

3.3 Sample

This research was approved by the University of Victoria Human Research Ethics Board. Participants were identified in consultation with the Office of the Seniors Advocate (OSA), as contact had already been established in many cases as part of the OSA's ongoing work. First contact was made by the OSA, and the researcher followed up with an official invitation to participate. This was a necessary step to clearly indicate the research's link with an independent office of the provincial government, as well as to make clear the fact that the invitation to participate was not issued under the OSA's legislative authority to request information.

Interviews were conducted primarily with nursing professionals and executives with responsibility for the oversight and/or delivery of home care programs and policy. The participants represent a variety of healthcare professions, including RN, RN(C), clinical nurse specialists, nurse educators, NPs and physicians. The goal was to gather a representative sample from different regions across the province. Representation is included from each regional health authority, as well as policy, regulatory, and association perspectives in B.C., one other province, and the national level. The researcher was fortunate to be able to speak with participants who had contributed to the CNA framework referenced throughout this report, as well as a participant with insight into nurse prescribing in the U.K. Each of B.C.'s five regional health authorities and the B.C. Ministry of Health were represented in the interviews.

3.4 Instrument Design

A semi-structured interview process was chosen to allow participants to share input from a variety of professional perspectives. Most interviews were conducted by phone, and several were in-person. The interview questions were shared with participants prior to the interview. Combined with a guided approach to open-ended questions, this process allowed participants the time to explore the set interview questions as well as to identify new avenues of relevance based on their professional experiences and location within the health care system.

The survey tool consists of 12 interview questions that were developed in part from the framework developed by the CNA. The researcher developed an interview guide and used additional probes where useful to solidify understanding of the concept. Relevant tangents were explored according to the participants' focus and expertise. Interview questions were shared with participants in advance to support thoughtful and thorough responses.

Minor wording adjustments were made to the questions posed to participants outside B.C. to maintain the integrity of the questions. Participants from jurisdictions outside B.C. were also asked additional questions regarding the context of nurse prescribing and current work afoot in their locality.

The following example question falls under the "Prescribing Parameters" element of the interview guide:

> What do you think the limits should be on the medications that RNs could prescribe if allowed? Optional Probe: Consider types of medications, amounts, refills versus new prescriptions, area of practice, etc.

See the appendix for a copy of the interview tool.

3.5 Method of Analysis

The audio recording of each interview was carefully reviewed and transcribed in full. Thematic analysis (TA) following Braun and Clarke's (2006) approach was used to identify, analyze and report patterns within the interview data. Braun and Clarke (2014) note that TA is a formalized method of qualitative analysis that is widely used in health and well-being research, and is a particularly useful approach when the research is in the arenas of policy and practice rather than academia.

As the interview questions followed a framework that outlined known elements of an RN prescribing program, the theming was done in a deductive way. That is, the majority of the coding and themes developed fit into pre-identified broad categories, for example "education and experience." The responses were analyzed at the semantic level, which calls for the explicit or surface meanings of the data to be identified rather than for the researcher to try to uncover meaning beyond a participant's comments (Braun & Clarke, 2006).

The six phases of Braun and Clarke's TA include:

1. Data familiarisation. The interview transcripts were read and re-read until the researcher was fully immersed and familiar with their content.
2. Coding. Succinct labels were created and applied to the data to identify features relevant to the research objectives.
3. Searching for themes. The codes were grouped into broader themes and the data rearranged under these themes.
4. Theme review. Themes were reviewed against the data and refined as necessary, in some cases combining or splitting themes. Normally themes that did not relate directly to the research objective would be discarded in this phase, however for this report, themes that were not raised by multiple participants but that raised important considerations were included with a note acknowledging the lower response rate.

5. Naming themes. Themes were defined in terms of scope and named for reader understanding.
6. Writing. The analysis was written up in combination with data extracts and relevant concepts from the literature review.

These TA phases occurred in a recursive rather than linear process, moving back and forth between phases as needed. To verify the themes developed by the researcher, an experienced nursing professional and academic researcher reviewed a sample of transcript excerpts. This review indicated agreement with the majority of themes identified.

4. FINDINGS

The qualitative analysis that follows is based on 17 expert interviews with professionals who directly provide home care, are responsible for home care regulation, administration or delivery, or shape policy or scope of practice development for RNs. The variety of participant experiences, perspectives and levels of responsibility contributed to rich and detailed interviews and a wealth of significant themes for consideration. It also resulted in a number of considerations being raised from a specific perspective that while relevant were not referenced by other participants and which therefore are not presented as themes in this report, for example that development and deployment of the clinical nurse specialist role should be a priority.

The analysis is presented in the categories outlined in the literature review and addresses each identified element of an RN prescribing program. Each element is summarized, and in most cases supported by representative considerations in the participants' own words. Themes are organized into a table in each element category, and ordered from higher level to more detailed or nuanced to facilitate understanding. The most significant themes raised by participants are included in the tables rather than all considerations that were discussed.

The response rate for each theme is referenced in the theme tables. The summary of each finding section uses a specific set of terms to connote the response rate for that consideration. Findings that refer to "a few" mean they were raised by two to three participants. The terms "several" and "some" represent four to seven respondents, while "many" and "most" refer to eight or more participants raising the theme. In some cases, the specific number of participants that raised a theme is referenced.

4.1 Scope of Practice Summary

Section 4.1 presents the four main theme groupings that emerged within the scope of practice element. These groupings are: setting the level of practice, determining the client needs that could be prescribed for, defining RN prescribing, and establishing prescribing parameters.

Setting the Level of Practice. Table 2 describes three central themes that emerged from considering what level of practice RN prescribing should be introduced at: that it should be a post-RN skill, that basic education should not have additional complex components to it, and that RN prescribing could be

considered at the entry level at a later time. The majority of participants felt strongly that RN prescribing need to be a post-RN skill requiring advanced education, and most felt that there was no room in the current bachelor level nursing program for new competencies, especially ones as complex as those involved in prescribing.

Table 2: Themes on prescribing as a post-RN skill

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
It Must be a Post-RN Skill	Prescribing should be a post-RN skill for those who are interested in it being part of their practice	14
RNs Need Basic Proficiency First	*"In nursing, depending upon what area you're starting your career in, it becomes so specialized that prescribing is adding another skin that increases risks for clients…if they're not yet competent."* RNs already have to learn a lot of competencies for entry level practice, so they should develop proficiency in those basic skills before taking additional training to prescribe safely in the complex home care environment.	8
It Could be Entry Level in Future	*"I think the overall future goal would be to have all RNs be able to prescribe, but I think we're far from that yet."* RN prescribing could be considered as an entry-to-practice skill after it has been introduced as post-RN skill and the education requirements are better understood	3

The strongest theme emerging from discussion of RN scope of practice was that RN prescribing should be considered as a post-RN skill, and not as an entry-to-practice skill that would be incorporated into basic education and the scope of all new RNs. Many participants noted that current RN education already includes a lot of challenging skill and competency development, and that some RNs were already struggling to master within the workload. As one described, "yes, when they graduate they've learned a lot of skills, but to actually be proficient in an area, you actually have to spend the time in it to learn the critical thinking around that skill." Many participants thought it was important for new RN graduates to develop proficiency in those basics before developing more advanced competencies requiring greater clinical knowledge and judgment.

Two participants thought RN prescribing should be entry level with an option for current RNs to take additional education to become prescribers, while one thought RNs should not be enabled to prescribe at all but that if it did go ahead, it would need to be a fundamental component of a university degree rather than supplemental education. A few participants noted that if RN prescribing did go ahead, some prescribing education should still be incorporated into basic education, as the pharmacokinetic and pharmacodynamics aspects of medication "underpins all the basic principles of nursing." As one participant noted, "the more exposure to it during their earlier years, the more flexibility we would have in potentially using those skills."

Developing RN prescribing as a self-initiated advanced skill was also discussed in the context of "not all nurses being created equal." Several participants with experience training, supervising and mentoring new graduates noted that knowledge and skill are not consistent across new RNs, there will always be

some that shine and others that will underperform. One participant highlighted that "it can be very difficult to bring RNs at different levels with different experience working in different areas up to the same level, and there is already concern with practice readiness at the entry to practice level." Some raised serious concerns regarding all new RNs being able to prescribe without having specialized education and experience at the post-RN level. As one participant illustrated the point:

> *I've been a site auditor for the nursing programs, and knowing what the graduates look like when they're coming out, and what their practice levels are. I do not believe they are at a level as an RN graduate baccalaureate [to prescribe]. This has to go to advanced practice.*

RN prescribing was also seen as a skill RNs should be able to advance into based on their own interest in having it be part of their practice. This was discussed in the context of the RN having the desire to prescribe within their scope, the willingness to take on additional workload, and feeling confident to develop the additional competence and take on the associated responsibility. While some participants felt many RNS would be keen to become prescribers, it was also noted that there were others that would not see prescribing as part of their professional role or personal interest. A few noted that some RNs might even leave the practice if RN prescribing became a basic requirement and they were forced to learn and use that skill. As one participant described:

> *I think back on when LPNs started doing medications, and I remember how a couple of people I know as LPNs said "I'm not doing it" and they just quit, so you lost nurses who were good at what they were doing because there was more requirements for their practice right? And I think that could be a risk for RNs…You know a portion of RNs who wouldn't want the responsibility right?*

There was some cautious interest expressed in re-opening consideration of RN prescribing as an entry-to-practice skill after it had been integrated as a post-RN skill and proven successful over several years. One participant suggested that it could be treated as a special skill at first, and then after about five years, once some consistency in the education plan had been developed, it could be incorporated into basic RN education. The concern with jumping to the entry-level skill centred on how, "when you change something, how do you get everybody who is at a different level, different place, with different experience up to the same level? And we rarely are successful there."

Determining the Client Needs that could be Prescribed for. The main themes raised regarding the client needs RNs could support through RN prescribing are presented in Table 3. These include that RNs should be prescribing for health situations common to home care such as chronic conditions or palliative care, or situations where clients are relatively stable or low complexity.

Table 3: Themes on Structuring and Limiting RN Prescribing

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Caring for Chronic Conditions	There is a real opportunity to improve the way we care for people with long term conditions or who need chronic disease management (UTIs, falls, frailty, COPD, heart failure, lung disease, diabetes)	6
Pain Management in Palliative Care	Symptom management for stable palliative care clients should be included (nausea, pain)	6

Providing Preventative Immunizations	*"Immunizations, both for influenza and pneumonia. We currently do that, again, we haven't been needing the prescribing language at this point, but it does fall in to that category in my mind."* RNs should be able to prescribe immunizations for home care clients	3
Caring for Exacerbations	RN prescribers could support home care clients who have an acute exacerbation and would otherwise end up in hospital	2
Prescribing for Low Complexity Clients	*"The acuity and complexity of the client would definitely drive whether an RN should be prescribing or not. Y'know basic rules in health care, the higher the acuity and complexity of a client, the further you have to go up the education chain to have a care provider who has an education level to be able to provide the service."* RNs should only be prescribing for clients that are stable, who do not have a new diagnosis and are not recovering from an acute episode.	5

There was a similar breadth of response regarding the health issues RNs could address through prescribing. There was some agreement around the ability to improve the management of long term and chronic conditions, such as diabetes and chronic obstructive pulmonary disease (COPD), as well as to manage pain and other symptoms common to palliative care clients. As one participant commented:

> *Well definitely in home health nurses see a lot of chronic conditions, such as diabetes, heart failure, COPD… and there are very well established guidelines on how to manage those types of conditions and if we're able to prescribe and adjust medications around those conditions, I think that would be beneficial.*

Several did not want to suggest chronic conditions be part of RN prescribing scope in blanket form, but rather described specific variations of parameters by condition or client health status. Some emphasized the importance of client stability for RN prescribing, while a few were keen to consider how RNs could better support home nursing clients who have an acute exacerbation and would otherwise end up in hospital. Urinary tract infections (UTIs) and the hallucinations and falls they commonly precede saw more agreement. Several participants expressed that a client's acuity and complexity should determine if it was appropriate for an RN to be prescribing, for example suggesting that RNs should not be prescribing the first medications following a new diagnosis, or where a health incident has occurred in a client that has multiple ongoing issues.

Defining RN Prescribing. Table 4 summarizes themes around defining RN prescribing, including the types of prescribing services beyond pharmaceuticals that could be included in how RN prescribing is defined, such as diagnostic tests, treatments, and equipment.

Table 4: Themes on defining RN prescribing and the activities it includes

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
RN Prescribing needs to be Defined for B.C.	*Defining RN prescribing "is a big piece of work, but it grounds exactly what we're talking about, and it's fundamental, and it's hard to believe we haven't done it."* A definition of RN prescribing is needed so that further consideration can occur based on a common understanding of what it entails	5
Include Ordering	*"When you see somebody and you get a sense that something's*	9

Diagnostic Tests	*wrong…tests would be really helpful. And start initiating the potential change in medications or adjusting doses."* Diagnostic testing, tied to competencies, is an important component of being able to prescribe	
Include Prescribing Treatments	Treatments, such as wound and mouth care, should be included as RNs may even be better at doing this and using the HA formulary than physicians	5
Include Prescribing Equipment	*"Treatment and equipment would be really, really beneficial. You know in order to have a wheelchair/walker/cane funded by Blue Cross you need a physician prescription to be able to have that."* RNs should be able to prescribe certain kinds of equipment, such as a walker or cane	4
Also Focus on De-prescribing	*"De-prescribing too is a big thing…Being able to recognize either what things could be harming somebody and when to stop it, so that goes hand in hand."* De-prescribing, discontinuation, should be included, and emphasized too.	3

Several participants indicated there is a need to clearly define "prescribing" and distinguish it from "orders" and providing medications because right now "all the partners come to the table well-intentioned, but using different concepts." The use of different concepts was reflected in the interview findings. Some indicated they considered RN(C)s to be prescribers because of the way they provide medications following a DST. Some also indicated that RNs in certain contexts were prescribing by providing influenza vaccines. A comment from one participant illustrates these different understandings of RN prescribing:

> *I would consider prescribing providing the medications, but they may consider it writing the prescription, which is a different thing entirely…but I would say filling a medication order for a condition is prescribing in a sense as well.*

Two participants noted that neither CNA nor CRNBC defines RN prescribing, to their surprise, and that developing a definition is necessary to ensure there is a common understanding of what RN prescribing entails.

Consideration of what RN prescribing should encompass further broadened into prescribing beyond medications. Several participants expressed that RN prescribing could include certain treatments, such as wound care, and the ordering of equipment such as a walker or cane. One participant noted that "RNs may even be better at doing this and using the HA formulary than physicians." Diagnostic testing was recognized as an important aspect of prescribing, but discussion only scratched the surface of this area as participants variously raised x-rays, bloodwork, swabs, urinalysis and other laboratory tests, and not always aligning on inclusion or exclusion. A number of participants described the difficulty of setting prescribing parameters, and the need for other elements, including the definition issue just described, to be shaped first. If it were to move ahead, they would want to see expert consultation on the issue.

De-prescribing was important to a few participants as they thought RNs had the duty and the necessary proximity, as more regular observers of the client in their home, to ensure unnecessary, ineffective, or even potentially harmful prescriptions be discontinued. One participant described it in terms of "really

looking at quality of life or you're looking at an older adult who may be on medication that actually needs to be simplified, reducing the frequency or taking it away completely."

Establishing Prescribing Parameters. The main themes raised regarding setting prescribing parameters for RN prescribers are presented in Table 5. These include that RNs should prescribe in specific circumstances related to the client's condition and using a specific decision tool, and that RNs should be able to prescribe more than just medications.

Table 5: Themes on Structuring and Limiting RN Prescribing

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Prescribing Using DSTs Only	Prescribing should be with DSTs only, as *"it's quite prescriptive but I think for confidence on both sides that's quite important."* Prescribing should be limited to following a specific decision support tool	6
Renewing and Adjusting Only	*"There's a difference between initiating therapy and continuing therapy. So being able to refill a prescription if needed, is something that would be of benefit…But I think there's complexities to initiating therapy for certain chronic conditions that you would want to have a physician involved in."* Err on the side of caution and start, at least, with only renewing or adjusting certain medications that had been prescribed by a nurse practitioner or physician	5
Tying Prescribing to Scope	There shouldn't be specific parameters, but rather prescribing should be tied to training, proficiency, scope and area of practice	4
Prescribing in an Interdisciplinary Care Team	*"If you've got a nurse who has got prescribing abilities as part of a multi-disciplinary team, I think they're going to be way better supported than, and have more success than just working off independently on their own."* RN prescribing can be independent and not a delegated act, but it should not happen without a connection to the client's other care providers	7

While not discussed in a formal question, it became clear that all but one participant had considered RN prescribing at a level below physician and NP prescribing, for example saying that they "wouldn't see RN prescribing having the same role as physician prescribing, so across the same spectrum of things." Some participants thought that RNs should only be able to renew or adjust certain medications that had been prescribed by an NP or physician while others discussed narrow parameters for specific situations such as prescribing new medications for pneumonia but not new antibiotics for acute infections. Several suggested prescribing should be tied to individual RNs' training, proficiency, and area of practice.

Some participants felt RNs should be prescribing using DSTs for specific health situations that lead the RN through the process of assessing the client and selecting the course of action. One participant noted that "DSTs help a lot because in terms of nursing practice that's a model that people are comfortable

with. It supports them making the right decision at the right time." Reflecting on past experience with certified practice parameters for STIs, one participant commented:

> *Those are pretty straightforward conditions that nurses can, by doing a standard history, can get a sense of what's going on and they can order a test or they can immediately dispense some drugs. But there's a very clear clinical situation, there's a very clear set of prescribing guidelines that goes with that. And it's also quite clear that if somebody experiences some of these other symptoms it suggests it isn't just a straightforward STI there's something else going on and then you'd better refer that person. That's the example I could see.*

DSTs were seen both as a support tool for the RN and as a safeguard to ensure the correct critical thinking and assessment prompts were followed to a safe prescribing activity.

Several participants thought RN prescribers should be integrated into a care team and work in an interdisciplinary manner with the physician and any other specialists providing care to the client. As one participant described it:

> *When you are looking after a client, you want to be interdisciplinary and you want to share the client, because they don't belong to one person, even though over the years we've been taught that physicians are the gate-keepers, they are in charge of the client, but it really isn't that any more.*

Another participant advocated, RN prescribing should follow an interdisciplinary model so that other health care professionals are not cut out of loop, potentially disrupting the quality of the care they provide. As they commented, RN prescribing should be independent and autonomous, but:

> *It needs to be in conjunction with the rest of the care team because you don't want people independently doing things that may have an effect on care that they may not be aware of. So there's a whole lot of things to be aware of, particularly in the type of client that you're going to see in home care, so you want to make sure there's those lines of communication that are open.*

4.2 Education and Experience Summary

Within the education and experience element of RN prescribing, two theme groupings emerged. Section 4.2 begins by presenting themes related to establishing general education and experience requirements, then focuses more closely on determining specific components of an RN prescribing education program.

Establishing general Education and Experience Requirements. Two main themes emerged from the participant interviews regarding general education and experience requirements: RNs should have a certain amount of experience prior to undertaking prescribing education, and there should be continuing competence requirements throughout an RN prescriber's career. These main themes and other themes that were raised are summarized in Table 6.

Table 6: Themes on education and experience requirements

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
BScN as Minimum	RNs should have at least a BScN, possibly a Masters, before being able to undertake prescribing education	3

Requirement		
Set a Minimum Amount of Clinical Experience	There should be a minimum amount of previous clinical experience within the specific practice setting or population so that the RN understands what the population and environment is like, and what prescribing would fit into that	10
Education should be Formal	The program should be at the college or university level and be pretty encompassing, it should not just be a quick online course	4
Length of Program	The prescribing education program should be about one year in length	3
Certification or Registration should be Established	Completing the education program and passing the competencies should result in certification or registration of some kind, but should not be transferable between practice areas until that area of competency has been passed	3
Continuing Competency is Essential	*"There needs to be some continuing professional development so they're being re-educated and kept up to date on knew knowledge."* There should be a continuing competency requirement. Professional development and updating are essential.	8

Most participants thought that a minimum amount of previous clinical experience working within the specific practice setting or population should be set, around about a year, although likely formalized as full-time equivalent number of hours. As one participant delivering home care described it, "it usually takes about a year or two for people to become comfortable to work with the population that we see." A few participants also raised the need to determine what level of education an RN should have before undertaking RN prescribing education, whether it be a BScN or master's education.

Several thought the advanced prescribing education should be formal - at the college or university level, and about a year in length. Two participants noted the system of specific educational courses for certified practice could be applied to the home care prescribing context as it's:

> *quite intensive, but it also gives a really good grounding for nurses and that gives them the confidence as well to make sure that you're doing the right thing with the right patient…those models seem to work and people who have gone through those seem to like them.*

A few participants thought that RNs should receive certification or registration of some kind following completion of prescribing education, but that it should be limited to the RN's specific area of practice and should only transfer to another practice area if the RN passed that area's competencies. Many participants noted the importance of a continuing competency requirement to ensure RN prescribers are actively maintaining their competence and absorbing new practice standards and knowledge. Two suggested professional development opportunities should be provided by employers or health authorities on a regular basis, cycling through the necessary competencies.

Determining Specific Education Program Components. The two most frequently raised themes regarding components of an RN prescribing education program were a robust pharmacology component and a supervised clinical component. Table 7 presents these themes as well as the interest expressed in interdisciplinary, practice-specific, and testing components.

Table 7: Themes on specific educational components

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Pharmacology Component	*"If you're prescribing any medication, whether it's just a refill, there still should be the fundamental underpinning knowledge around the pharmacokinetic effect, pharmacodynamic effect."* Thorough understanding of pharmacology is fundamental	10
Clinical Component	There should be a supervised, practical, clinical component	8
Interdisciplinary Component	*"I would like to see collaboration around the education for the interdisciplinary team and that way everyone is getting the same information."* There should be education with and for the interdisciplinary team, for example exposure to working with pharmacists	3
Practice Specific Component	There should be education related to prescribing for your specific population, an enhanced competency	4
Exam Component	There should be an exam or portfolio requirement to test for competency and readiness following the education and practicum	5

The majority of participants also emphasized the need for RNs to have a thorough understanding of pharmacology that went beyond that included at the entry-to-practice baccalaureate level, and included pharmacokinetics and pharmacodynamics. One participant described the importance of robust pharmacology education in the context of client safety: *"you have to have a solid, solid foundation – knowledge foundation, practice foundation – in order to then know what the consequences mean to the patient."* Several participants emphasized this point in the context of clients with multiple health issues where adding or changing a medication may affect other medications the client is taking.

The need for a supervised practical component where the RN would get experience prescribing and monitoring the effects of their prescriptions was strongly supported by most participants. A few participants also suggested that RN prescribing education should include a component specific to the setting and population being prescribed for, so that knowledge and skills would be tailored to what RN prescribers would encounter in the field. This would be considered as an enhanced competence.

A few participants noted the need to move beyond segregated education patterns – "we're still in such silos for education – nursing usually just would be taught nursing, pharmacy would be just taught to pharmacists, and physicians are just physicians" – and into interdisciplinary education. For example, RN prescribers should receive teaching from pharmacists, physicians and NPs to ensure a comprehensive and integrated knowledge and skills base. Another theme raised by some participants included the need for a form of final assessment to determine readiness for practice, such as an exam or portfolio review.

4.3 Oversight and Accountability Summary

Section 4.3 is organized into two theme groupings: considerations around structuring accountability, and establishing mechanisms for oversight.

Structuring Accountability. Table 8 presents the themes participants raised on how RN prescribers would be accountable for their prescribing activities. Participants' input centred on the existing foundation of RN accountability for their individual practice and the need for role clarity and governance structures developed by the regulatory body.

Table 8: Themes on accountability and responsibility

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Responsibility & Accountability are Part of Nursing	*"We are accountable for our own practice. And if I go out of my scope, I'm accountable for that. If I don't practise my scope, and I don't do what is within my scope, that's negligent. And if I do something wrong within my scope, that's malpractice."* Personal and professional responsibility is already a core component of RN practice.	7
Roles Need to be Clearly Defined	CRNBC and regulatory bodies need to be very clear about who is able to do what. That is what activates professional accountability	8
CRNBC will Establish Governance	*"We would need to have more elaborate mechanisms for recording and monitoring and regulation by the professional body."* CRNBC should establish a rigorous overarching governance framework to ensure prescribing practices align with competence and ability	7
Health Authority Accountability Structures	*"There does need to be some accountability structures created on the health authority side as well to ensure that it fits into the day to day work that's happening and the expectations within the health authority."* Health authorities should also establish accountability structures to both ensure their expectations around the day-to-day work are being met and to offer support	4
RNs Prescriber Designation or Protected Title is Needed	*"It's like the nurse practitioner is a protected title – maybe it's an "RN-P" or something, and then it recognizes their expertise and their ability to prescribe, so it is all clearer to the public, right?"* Some means that enables clients and other clinicians to identify which RNs are prescribers is needed, such as a special designation, credential, or protected title. This is important both to recognize the RNs competencies and legitimacy, and for public safety and communication	3

Several participants noted that professional responsibility and accountability is already well-established within the RN role. RNs are expected to know their capabilities and not conduct care activities they do not feel confident and competent to perform safely. It was noted that the level of autonomy and accountability would depend on the extent of the role scope:

> *So if you say that nurses can have a much broader scope in terms of they actually can initiate a prescription, then I would say that the accountability, whatever that would look like, would have to be much greater than if they are able to adjust a diuretic within a certain percentage based on assessment or a client weight or whatever it is.*

The need for role clarity was emphasized so that health care professionals would know whose professional accountability would be activated.

Many participants noted the importance of CRNBC's role in establishing an overarching governance framework and mechanisms for recording, monitoring and regulating RN prescribing activities. It was also suggested by some that health authorities would need to establish their own accountability structures to both offer support and govern day-to-day work. A few participants noted that to promote public safety, a special designation or protected title should be established so that clients and other clinicians can know who has prescribing authority and what that authority includes. Two participants felt that a designation or protected title should not be created.

Establishing Oversight Mechanisms. Themes related to the oversight of RN prescribing activities are presented in Table 9. The three main themes that emerged included the value of having a mentorship, the need to be able to consult with NP or medical prescribers on a discretionary basis, and the use of practice reviews to ensure prescribing is being done appropriately.

Table 9: Themes related to oversight of RN prescribing

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
RNs Prescribing should be Autonomous and Tied to Scope	*"Once they've got some sort of indication that they have got that competence to do the job, then they should be pretty autonomous to be able to do it."* Autonomy should be dependent on the scope and core competencies that are decided upon, and should be reasonable once the appropriate training and structures are in place	5
Mentorship is Valuable	New RN prescribers should receive monitoring, supervision and then mentorship that is similar to the NP-GP structure but more collaborative	6
Discretionary Consulting is Key	RN prescribers should consult with an NP or physician when a higher level of care is needed, on a discretionary basis. Establishing regulatory physician duty to provide consultation may need consideration	8
Develop a Communication Loop	*Accountability to your other colleagues who you are working with…how you communicate what you've prescribed…you need to be taking ownership of what you've done right?* RNs should be accountable for communicating their decisions and prescribing activities to the other members of the care team	5
Institute Practice Reviews	There should be a mechanism, such as a recertification exam, audit, or practice review, to ensure prescribing is done appropriately and that prescription changes don't pose a risk to the client	6
Begin with High Oversight Initially	*"Initially there might be more oversight you know, just to make sure everybody's got it right, and then as time goes on and everybody gains more experience, individually and collectively, then you might not need so much oversight."* More oversight will be needed initially to make sure the system has been established correctly	3

Once accountability structures are in place at the regulatory and employer level, it was thought by several that autonomy should be reasonable and tied to the scope and core competencies established for RN prescribing. A few noted that autonomy would need to be much greater if RNs' scope included initiating a prescription than if it only included renewing or adjusting prescriptions or following DSTs.

A common theme was the need for RN prescribers to receive monitoring, supervision and mentorship from a physician or NP that had a collaborative focus. Many suggested that RN prescribers needed to be able to consult an NP or physician for prescribing support, but that this should be on a discretionary basis guided by the RN's competence. Citing incidents of physician refusal to engage with NPs when that role was instituted, several participants raised concerns about the accessibility and responsiveness of physicians and one suggested that consideration should be given to regulating the physician's duty to consult with prescribing RNs. One participant suggested that consulting and collaboration should be built into the regulation around prescribing as "a requirement both ways" so that physicians and RNs are communicating and consulting on an ongoing basis. Another participant thought the need to be able to consult was so important that they were "hoping that all clients that the nurses would be prescribing for would be attached to a physician," and that RNs would not be able to prescribe for home care clients without a regular physician.

Other themes included the need for mechanisms and a requirement to communicate between RN prescribers and other staff involved in client care. This was both so that RNs would be accountable for their decisions, and so that all those providing prescribing services or other care would know what had been done for the client. As one participant noted:

> *Where we have failures in our medical system are often at transitions. Failure of communication leads to bad outcomes for patients. Anything that enhances that ability and that requirement for communication I think is essential.*

Part of enabling the communication loop is providing RNs with access to check prescribing records in PharmaNet to avoid duplication of prescribing activities.

Some participants expressed a need to institute a practice review or audit mechanism to serve the dual purpose of providing feedback to RN prescribers to help improve their skills and confidence, and to ensure they are prescribing safely and appropriately. A few suggested there may be a need for higher initial oversight that would decline as RN prescribing became fully integrated. One participant noted that prescribing patterns of all prescribers are not as tightly watched as they should be, and that checking a client's prescription history is a voluntary step that is often skipped due to the time it takes to access the computer system. The participant noted that setting up accountability mechanisms for RNs could be a means to tighten up prescribing oversight of physician prescribing as well by using PharmaNet to see individual prescribers' prescribing histories. As the participant stated, "it's a matter of making sure the systems support clinical practice."

4.4 Implementation and Uptake Summary

Section 4.4 begins with the presentation of themes related to improving implementation and uptake by supporting RNs to prescribe throughout their prescribing journey. This is followed by a summary of themes related to developing strategies for implementation and uptake.

Supporting RNs to Prescribe. Table 10 presents themes identified by participants as ways to encourage uptake of prescribing practice by RNs. The themes in this section all centre on the need for thorough support throughout the process from education to practice review.

Table 10: Themes on providing support for RN prescribers

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Solid Support at Every Step	*"They're supported in every step of the way when they're making the decisions, when they're having questions and ensuring that the education process to get there is well laid out."* Ensure RNs have adequate amount of education, training, support in the field, and feedback to feel confident and competent to prescribe	9
Support in the Field	*"It's fine to train somebody, but you need to provide them with that ongoing support on an ongoing basis as well."* Ongoing support and education in terms of information, resources, active practice leads, additional and refresher training provided by the HA or employer	5
Providing Practice Support Tools	Practice support tools from regulators and employers, such as CRNBC practice guidelines and standards, DSTs clear governance structures, are in place	6
Employer Support	Support from the provider such as recognition of need for the role, encouragement to advance, time away to undertake the necessary education, funding to pay for it	6
Ease of Consulting	*"They've got somebody to go to if they've got questions or concerns...even if it's just on the end of the phone, somebody they can call and consult with."* Adequate collaboration, support from an interdisciplinary team, access to timely and responsive consultation and mentoring	8

Providing adequate support was most frequently raised as the way to facilitate the implementation and uptake of RN prescribing. Several different modes of support were discussed, including advance preparation through education and training, support in the field through supervision and practice support tools, employer support, and adequate feedback and continuing education. Many participants noted that mentorship and collaboration in a disciplinary team would appeal to RNs considering prescribing. As one participant described:

> *It's quite a fairly independent practice going from home to home. And so if they run into complicated situations they would need a support network to help them sort out some of those issues.*

Employer support involved a number of aspects, including recognizing the need for the role, identifying possible candidates from their RN teams, and then helping with the logistics such as by allowing the RN the time away from work or offering funding to undergo the education program. One nurse noted that the way to build advanced skills in the broader nursing profession is through employer and leadership initiation:

A lot of it is based upon what we see in terms of their leadership and their decision-making abilities and the way to problem solve. If I see a – a nurse on a unit that she 'gets it' or he 'gets it' and is willing to speak up to say – and knows how to advocate, I will always, always encourage them to go on to graduate school. To know what direction they want to go in, and where do they see themselves practising in the end.

One participant also raised how employer support would make the implementation process much smoother:

because they are such a key player, and once they've determined there is a need, and government decides there is a need, then we need to work with both parties to start to bring the regulatory approach.

Developing strategies for Implementation and Uptake. Table 11 presents three themes on implementation and uptake not described in the support themes illustrated in the above section. These include showcasing the professional value of RN prescribing, effective public communication, and using the tools and lessons learned from implementing NP prescribing as a springboard.

Table 11: Themes on implementation and uptake strategies

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Showing Professional Value	*"It's about a desire to increase your scope and increase your competence and your accountability as a clinician."* RN prescribers see the opportunity for clinical advancement, expanded scope, feel valued, and have an effective evaluation mechanism in place to be able to understand the benefits and outcomes in order to show the value-added	6
Communicating Effectively	*"There needs to be huge public awareness that nurses are qualified to prescribe…and we would be able to identify who these individuals are versus a nurse that cannot prescribe yet."* Clear communication to the public, other clinicians, and health care organizations to build understanding and trust regarding RN prescribers' scope and their role in the health care system	5
Capitalizing on Lessons Learned from NPs	*"The NPs have already gone through the whole process…so I think looking at how they had developed their role would be advantageous."* Use lessons learned and existing tools from other scope of practice changes and new prescribing roles, such as NPs, certified practice, CNSs, pharmacists, to avoid some of the challenges they encountered. Consult RNs in role development	8

Several participants expressed that "there's a lot of nurses out there that would like to see this happen," who would see both its professional advancement value and benefit to clients. As one described it:

A lot of nurses would love to have this part in their role, it would make life a lot easier, you know their clients would find value in this if they get timely access to the tests and the medications that hopefully will make that change in whatever their condition is and improve.

Communicating this value, based on evaluation and evidence, was noted as a method of promoting uptake. As one participant noted reflecting on past experience, "that's another lesson learned… is for us

to show that value add. So 'this is the difference that RN prescribing has made,' and do that right from the start, not just for the RNs, but the rest of the team." In addition to communicating value to RNs and other health professionals, several participants raised the need for an effective communication plan for clients and other stakeholders to keep people informed of scope developments and build trust in the new RN prescribing skill.

Many participants noted that implementation could be facilitated by using the tools and lessons learned from previous scope changes and new prescribing roles, such as the creation of NPs, LPNs being brought into home care, midwives, pharmacist prescribing, certified practice, and CNSs. One significant lesson learned was the importance of collaborating with RNs and other clinicians on the development of the role. A few participants stated that it would be important to think through the details of implementation and resolve potential barriers, such as updating electronic forms to accept RN signatures, as much as possible in advance "so that the supports RNs need are in place at every stage." As one participant noted,

> *We do tend to kind of treat like everything is brand new and everything is new, ha. And the reality of it is, we implemented NPs into the physicians. From our mistakes of the past, we need to learn from them and not merely start over with a big blank piece of paper.*

Two participants noted that prescribing could be appealing to RNs in rural settings where they struggle with physician coverage and would value being in an interdisciplinary team. Another noted that bringing in RN prescribing in a quite limited way initially would help RNs develop enough confidence in their new skill to make the right decisions, knowing the implications for people's health. So the RNs would have the "confidence, they have the training that they need, and they have the connections with the health system that they need" to be able to defend their decisions when challenged by other care providers on their actions, as the participant noted was a common occurrence.

Anticipating Changes Needed to Implement RN Prescribing. Participants noted a large variety of regulatory, employer, and operational changes that would require consideration if RN prescribing were planned for the B.C. home care setting. The comments varied so widely that theme development could not be properly supported, yet respondent input into these areas illuminated important factors for consideration. There were only two themes that did emerge from multiple voices: legal and regulatory change, and remuneration change. Participants noted the need for the legislation, regulations and practice tools (such as standards of practice and DSTs) to be amended to allow for RN prescribing. Four participants raised the potential need for remuneration to be reconsidered. As one participant described, "they would have to look at pay rates, and I think the Union would say 'okay now are we going to get paid more money because we're taking on an additional role,' you know more responsibility." In place of a theme table, a summary of responses raised by one or two participants is presented here.

It is important to take a national approach in terms of what the design and regulation and safety of RN prescribing would look like. Changes would be needed to the code of conduct, to culture and attitude, to health authority policies, to human resources and business practices. Consideration should be given to establishing home care as a new area of certified practice. Certified Nurse Specialists should get title protection, and then the focus should instead be on bringing more RNs to that level. Current nursing tasks such as insulin dose adjustments and preventative immunizations should be brought into the prescribing language. Many documents are currently designed for physicians and/or NPs would need to

be revised with wording allowing RNs to prescribe. RNs would need a way of connecting to MSP billing of tests, without billing for their client visit. The whole service delivery model needs to be thought through, from the logistics of the RN needing the electronic tools to write a prescription at the point of care to interconnectivity of various software tools.

4.5 Challenges Summary

Section 4.5 is divided into three subsections on the challenges around enabling RN prescribing. The subsection theme groupings include building stakeholder acceptance, understanding challenges related to the RN workforce, and identifying logistical challenges.

Building Stakeholder Acceptance. Table 12 summarizes the themes participants raised regarding challenges that might be encountered when seeking understanding and acceptance amongst other health professionals and the public. The most frequently described theme was the challenge of managing physician resistance, followed by the need for a clearly developed and communicated scope of practice, and consideration of how team adjustments will be needed to introduce an RN prescribing capacity in interdisciplinary settings.

Table 12: Themes related to acceptance by health professionals and the public

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Physician Acceptance will be Hard to Get	Prescribing is *"going to cause some angst with physicians because it is a realm that has been pretty much physician based"* Physicians are still struggling to accept NPs, so how can we go and add another prescriber and have them feel comfortable? Concern. Resistance. Tension.	12
General Acceptance will Require Work	Community and physician perception in terms of what makes up a full care team is another big issue. People have a very traditional sense of what a physician role is and that will need to be adapted.	4
Public Education is Needed	*"I think there would have to be a fair bit of work around that too to educate the public and make them feel more confident and that nurses can do this now…legally and safely"* Education of the public and client base needs to be a concerted effort so people understand the new role and can feel safe.	5
Distinct and Clearly Communicated Scope	*"The interpretation of what that change actually is, is really challenging."* Developing a role that isn't just a "mini-NP" and clearly communicating that scope, as well as that any overlap is intended to support rather than detract from other clinicians' practice	10
Team Restructuring Needed	*"A key thing, you need to have an environment that supports that inter-professional or multidisciplinary sort of practice so that everybody's skills and abilities are being used to the best that they can be so you're not running into inter-professional conflicts and competition between who does what."* Building understanding of how an RN prescribing scope fits into the current health care structure, and of the accompanying changes to how	7

	professionals will operate	

The theme most frequently raised by participants was the challenge of building physician understanding, acceptance, and trust in RN prescribing. A few noted that this was not a current strength within the system and as one participant illustrated the point:

> *We are not good at consistently managing other professionals' anxiousness, unhappiness, feeling of being threatened, and territorialism when their scope is encroached upon. We need to show this will help them by taking away some of the more minor tasks.*

Participants noted the need for physicians to support the level of preparation provided in the education program and have their concerns addressed regarding RNs' ability to prescribe within their scope as competently as physicians. While participants did not perceive physician acceptance as an insurmountable barrier, they did stress that NPs' experience was a warning of just how big a challenge this could be:

> *We had physicians who would walk out of an office every time an NP walked in. Because they flatly refused to work with them or have anything to do with them. So there's some things that we can learn from that.*

In addition to physician acceptance, acceptance by the public and clients was also raised. It was noted that it can be difficult to make the public understand that non-traditional care team configurations can still meet the needs of a community. Other themes included ensuring the role was clearly defined with a particular scope that is not a "mini-NP," and then supporting other health professionals to understand the resulting changes to team structure.

Understanding RN Workforce Challenges. Table 13 summarizes three main themes related to RN workforce changes, including the concerns around uneven RN performance, that current scope is going unused, and that it can be challenging not to further overload RNs.

Table 13: Themes on challenges related to the RN workforce

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Uneven RN Readiness	*"There is already concern with practice readiness at the entry to practice level."* Ensuring that RNs pursuing prescribing scope fully meet entry-level competencies, and graduate from the prescribing program with consistent levels of competence	4
Current Scope is Underused	There is a perception that nurses currently aren't working to scope as is. *"So wouldn't we want to be really doing that first? As a first step?"* We should focus on strengthening within existing practice before adding more	5
Managing RNs' Workload	*"It's not just adding on workload, but shifting it as well."* RNs' scope and consequently their workload may become too broad if the trailing edge isn't also considered when a scope advance on the leading edge is introduced.	7
Impact on Non-Prescribers	Managing the people in practice that may not come out with the knowledge and background to be able to enact the new expanded	3

	scope, as well as those RNs who might leave the practice if they were required to prescribe	

Some of the participants that supported RN prescribing as a post-RN skill in part so that new graduates would have time to develop their competencies through hands on experience reiterated this concern when discussing challenges. They suggested that both upon entry to the advanced education program and following its completion:

> *The concern that not all nurses are created equal will be a challenge. And it has been whenever we've expanded the scope of practice anywhere. That knowledge and skill isn't consistent across two care providers.*

A few also noted that those who chose not to seek prescribing scope may need additional management so they continue to feel valued and understand their working relationship with RN prescribers, and to avoid any negative power dynamic consequences. As it was illustrated by one participant:

> *Whenever we've changed the scope of practice for any care provider, what happens is you tend to have those people who sort of over-perform and function at that side of the scope, embrace the scope. And then you have a few people who sort of underperform and are really uncomfortable with that change and that part. The majority of the population lands in the middle and they do what they need to do and they embrace the new challenge and follow the rules. But unfortunately there's always been a few people on the side of that.*

Several participants thought that RNs and NPs currently have underused scope, and that fully using current scope should be a first step, however participants did not elaborate on what parts of current RN scoping should be better utilized. There was concern from some participants that RNs' workload is already high and might become untenable if other tasks at the lower end of their scope were not adjusted in response:

> *What concerns me is that if you just add more to the workload of nurses it then becomes an unsafe situation because in many situations, they're already stretched…so if people are prescribing, diagnosing, changing medications, potentially, those are higher risk activities, and so you don't want to add that to someone who is already potentially taking shortcuts.*

A few noted that careful attention should be given to removing trailing edge scope to ensure the new prescribing scope did not overwhelm RNs who are already feeling overworked in many cases.

Identifying Logistical Challenges. A number of themes related to challenges clustered around the logistics of operationalizing a new way for prescribing to be conducted. While response rates were not as high as with some other themes, it is clear participants considered a variety of practical challenges small and large. Among the themes illustrated in Table 14, the focus on developing rigorous measures to ensure client safety and the need to create system access for RN prescribers were raised most frequently.

Table 14: Themes related to logistical challenges

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Being Sure Clients Need This	*"There needs to be a balancing of where are the needs and where can they best be filled by RNs versus other people in the care team."* Determining if and where there actually is a gap in home care for	3

	seniors, and if there is a need for a "nurse practitioner lite"	
Many Operational Processes Need Change	The overall challenge of designing and operationalizing everything from the role description to skill monitoring, knowing that how slow and difficult it is to implement just a new guideline for something nurses are already familiar with	3
Legislative Change is Tough	*"To not just underestimate the complexity of changing the legislation and the equity as part of that process."* Changing legislation takes time and thoroughness, especially in a way that gives RNs equity in the process	4
Client Safety is Paramount	Setting up careful client safety measures in the context of multiple prescribers, increasingly complex clients and the risk of duplicating prescriptions	6
RNs will need System Access	*"How do you communicate the prescription back to the other providers of care?...Generally as a rule we're quite aware of the physician orders, but we don't have a mechanism that works the other way around. For sharing."* Accessing health infrastructure is important, in terms of getting access to physician or NP consultation, developing a communication loop to share information back to them, getting access to test results	5
Fee For Service is a Barrier to Collaborative Client Care	the fee for service system I think is one of the factors that creates the physicians wanting to be very protective of prescribing as opposed to sharing that	4

Getting RNs the access to the client information sharing systems they would need to prescribe safely was noted as another challenge by some, particularly because NPs still do not have access to PharmaNet. Home care nurses would also need access to mobile point of care electronic devices. As one participant described:

> *In home and community care, you know you're faxing things back and forth and or just writing in files that don't even go to the doctor right? So, that's where it would be really important to have access to PharmaCare right, so…everybody is accountable…to check in on PharmaCare as to what has already been prescribed, and who is prescribing it.*

Several participants noted that having this information and collaboration loop in place is important because home care clients often have a number of providers and specialists involved in their care, because of their complexity, and that raises the potential for complications. It was described that:

> *The complexity that is out there right now, in terms of the clientele, is beyond remarkable. And when I say that it is because people are living longer and they've got more co-morbidities, so you have to take into consideration all of that complexity.*

A few participants noted a variety of other challenges from the overall challenge of designing and operationalizing RN prescribing smoothly to not underestimating the lengthy process of legislative amendment. One participant suggested that since legislative review would need to happen anyway, "from a policy perspective, it might be a wonderful opportunity to revisit the language and ensure that it is equitable and interprofessional. And maybe lose the term 'orders'" in existing areas of nursing practise. A few noted an early stage challenge would be measuring service gaps and determining if and

where within home care the access needs exist, as well as if RN prescribing is the best of the available routes for improving access. As one described it:

> *I would definitely see it as beneficial if we can certainly identify the population that is missing this in health care, and I'm not sure what that population is right now, so I find this all very intriguing. Do I think it could be beneficial? I'm sure it could be if we can identify the population that needs it.*

The possibility of reflecting the increased scope and responsibility in RN prescribers' remuneration was raised by a small number of participants but no theme emerged as to whether it should or should not result in an increased salary. As one participant against increased compensation explained it:

> *We've seen that often we've priced ourselves out of health care models, and so you would have to be cautious, that we didn't do that; a second reason not to be remunerated is the complexity and the cost it adds to the system and the fracturing that might cause within the profession.*

However, one participant did note that RNs would need a way to interact with MSP without billing for an appointment, as RN prescribers would not enter the physician fee for service (FFS) model.

The controversial topic of the FFS model was discussed quite emphatically by a small number of participants, in several contexts. Several participants, notably including both physicians interviewed for this research, raised FFS as a problematic and "very angst producing model" that is one of the sources of the challenges around physician acceptance. Another participant commented that FFS "sets up some unhelpful dynamics" when team members have different incentive models, and they "don't think people would be nearly as hung up on who does what in a system where the compensation methods would be comparable." If FFS weren't a factor, it was noted that physicians might feel less threatened by advancing RN scope, and be more willing to 'share' their clients with a new prescriber.

4.6 Benefits Summary

Participants raised a large number of benefits to enabling RN prescribing for home care clients. These themes have been loosely grouped into the categories of improving care quality and achieving system benefits. Each theme is presented once although it may represent a benefit to both care quality and the system, for example in the case of reduced hospitalizations which can be indicative of both better client health and reduced cost and strain on acute care resources.

Improving Care Quality. Table 15 presents the themes related to care quality benefits. The main themes raised by participants were greater and timelier access to care, which resulted in additional benefits of better client experiences and health outcomes. Participants had some rich illustrations and convictions to share in this area. To impart this to readers, this findings section includes a larger number and length of direct quotations than some others.

Table 15: Themes on benefits to the quality of care delivered to clients

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Greater Access to Care	*"Well I think access is the big one. Because physicians don't go to people's homes all that often and getting into the physician's office can be a challenge."*	9

	Providing the patient with the care they need at the time they need it. Home care clients need access to care in their homes	
More Timely Access to Care	*"Increased timeliness of access to care. It is about absolutely timely care to reach diagnoses to get treatment, so that - especially in older adults - that we're not waiting around for the cascade that happens."*	10
Better Quality Care	*"They can spend more time sorting out what the issues are. And that might result in better prescribing…higher safety, less chance for adverse reactions."* Improved quality of patient care because RNs can take more time with clients and use a holistic approach	6
Earlier Intervention & Better Health Outcomes	*"The sooner you are able to diagnose and start treatment, the less likelihood you are going to have – especially in older adults – a cascade effect of decline…especially in multiple chronic diseases."* RNs can provide earlier intervention and prevention when clients' condition, needs, or reaction to the current prescription changes. This leads to increased clinical effectiveness and better health outcomes	6
Better Monitoring of Client Changes	*"They're also in seeing client's more frequently, they also have the ability to monitor more closely the effects of whatever they're prescribing, so if it is a medication, quite often doctors will say 'try this and come and see me in a couple months' but then something comes up."* RNs are in the client's home, seeing them more frequently, and can better monitor a client's adherence to the medication, its effects, and make adjustments immediately when something changes with the client	3
Improved Client Experience	*"It will really support the clients we see in the home, especially with the limited access to physicians now and for the seniors to get out to even see the physician, just for minor things."* The client's experience is more positive as it is streamlined, more convenient, and timelier. Increased client satisfaction	6
Improved Continuity of Care	*"Keeping that continuity of care and that would be the biggest benefit, I think, for the clients."* Avoiding disruptions in service in terms of the health care professional providing the care and delays in completing a course of action would be a big benefit for clients.	5

The majority of participants suggested significant potential benefits of RNs being able to prescribe for home care clients were increased access to care, and timelier access to care. Getting the client the right care at the right time from the right provider was seen as leading to additional benefits of earlier intervention, avoidance of emergency hospitalizations, and better health outcomes and care quality overall. One participant described it this way:

> *The number one complaint the public has about the healthcare system is the limited access, and often that results in compounding health issues, so I mean in a perfect world, we improve health, and increase satisfaction of our health professionals.*

Another illustrated the compounding health issues that could be disrupted or prevented with the following example:

It was delayed so they couldn't walk, so they ended up getting pneumonia, and because they couldn't walk they stuck in a catheter, and they ended up with a urinary tract infection, and now the patient is palliative. That is a cascade I see all the time.

One participant noted the access to timely care benefits RN prescribing has brought to the U.K. As they elaborated:

Having some kind of quick, timely responses to those acute events has made a significant difference to client care and continuity and timely access for those people who are in acute crisis.

Client experience and better monitoring of conditions and medication effects were noted as an important benefit by several participants. RN prescribing has the potential to make the patient journey more efficient and streamlined, for example by avoiding a second home nursing visit (sometimes by different nurse) caused by delayed physician response, or by not needing to involve an unnecessary additional health care provider. As one participant summarized:

The elderly already have a difficult time getting to appointments, and the home care nurse is in the home more frequently, we are seeing the client change and we can provide more preventive prescribing if we needed to - if we're identifying that the clients are not doing as well, if we're able to order blood tests sooner, we can catch things sooner instead of waiting for the client's family to get them into the physician for an appointment, or an NP for an appointment.

One participant suggested that RNs might be able to spend more time with clients to sort out the issues being prescribed for than what is allotted with physicians under the FFS model, and that this might increase the quality of the intervention.

Some participants also discussed that continuity of care would be improved if RNs can act, within their scope, without having to wait to connect with a physician. For example:

If the medication was there in the home, and it was just an added dose or something, you know, they couldn't stay in the home for two hours to wait for the on-call to call back. They'd have to go back, or send another nurse, which again, puts another sort of person into the situation, which can make things more complicated, add confusion to clients that are already possibly a bit confused or have cognitive impairment, having someone else coming into their home…. More stress for family, that kind of thing too. So if there was more immediacy to it, like if RNs could just "okay I'm going to make this change, I'm going to prescribe this antibiotic, or change this antibiotic if someone is having a reaction or something, you know, they can do it immediately and follow up within an hour or so of getting it all changed.

Several participants also noted benefits in the form of earlier intervention and better health outcomes. One participant described their observations of RN prescribing in the U.K. as "a fundamental component of that kind of wrap-around response service and meeting the acute episodic needs of the clients in the community." An example of where timely testing and prescribing intervention did not occur, acknowledged as an extreme, was used to show just how large a benefit there could be to RNs being able to prescribe for home care clients in certain situations:

There was a client that was walking around with a broken hip. The staff knew there was something wrong, they couldn't get ahold of the physician, so they waited. It had to go to the family physician to order the test – sure enough, by this time it was probably an undisplaced fracture, that became displaced, because she was walking around on it… and now what's

happened is she is now totally wheelchair-bound. It is things like that – that's an extreme – but if you've got the ability to have RNs actually ordering, then they would have ordered an x-ray…

Achieving System Benefits. In Table 16, the themes related to benefits to the healthcare system are summarized. The main themes included increased sense of professional value and satisfaction for RNs, increased efficiency and better utilization of healthcare resources, and increased service coverage.

Table 16: Themes on benefits to the healthcare system and health care providers

Themes	Interviewee Input on RN Prescribing in B.C.	Response Rate
Reduced Hospitalizations	*"I would predict decreased emergency encounters and hospitalizations." "Preventing or stabilizing client diseases in the home."* Decreased hospitalizations and emergency encounters	4
Increased Efficiency	*"It could provide more efficient and streamlined care for clients, potentially – or take away unnecessary steps." "The stretching of the resources is probably the primary benefit."* Better use of physician and RN time, supplementing uneven physician coverage with RN support, and more streamlined patient journey	6
RNs are Brought up to their Full Scope	*"You're enacting full scope of practice through RN prescribing."* RN prescribing means they can work to their full level of scope and capability	6
RNs can Better Manage their Workload	*"In some ways possibly decrease some of the work load for RNs in the community having to try and get an on-call doctor or to save something for Monday morning…manage some of these things in their own scope."* It would make life a lot easier and decrease workload, RNs could take on more instead of making referrals	4
Increased RN Professional Value	*"To the nurses it would give them more professional satisfaction for the work they're doing because they're using the more full scope of their knowledge and they can deal with more of their patients' needs by being able to prescribe…to do a more complete job."* A lot of RNs would love to have prescribing as part of their role, it would make life a lot easier. Working to full scope, advancing professionally, and feeling valued is satisfying	8
Better Service Coverage	Improved access to care given the shortage of physicians, because RNs are available seven days a week not five, better coverage in rural areas	6
Cost Savings to the Healthcare System	*"It's all of the delay that comes from the wait, and the other thing is then they're sent to Emerge instead of being able to be sent to a far less expensive diagnostic area, to have tests done."* Avoid fee for service and pay at the RN rather than physician salary level, less utilization of costly emergency department resources	4

Several participants noted that physicians already ask RNs '"What do you recommend? Write it down and I'll sign it when I get in," and that RN prescribing would make the care system more efficient by avoiding this step, and the delay it often involves when the RN cannot reach the physician by phone. Participants noted that incorporating this common process into RN scope of practice would enable RNs

to work to their full scope and capabilities, and make their workload easier by giving them more control. One participant seemed to get to the heart of what many participants expressed with the following description:

> *A lot of time nurses quite often know what to expect, or they see a clinical situation, especially in the seniors and people with established chronic conditions and they have a clearly established trajectory of what their disease progression will look like. Quite often, nurses have the insight, or know what's the next step, and in terms of diagnostic testing or in terms of medications, and I would say over 80% of the time, nurses would or could anticipate – once they've been in the system long enough – what the physician would order. But they would have to ask the physician to review the client situation and then in the end the physician may come to the conclusion of what the nurse already knows, but they have to go through that step.*

One participant noted how physicians collect billing fees for signing off over the phone and later completing the paperwork on an RN-advised medication or test, without needing to actually interact with the client, and that this cost to the system was "completely unnecessary." It was suggested the salary remuneration model would lead to reduced costs, as would the shift from ordering tests and providing care in acute care where the expenses are higher. Another participant described how RN prescribing would be set up to reduce strain on the primary and acute care system:

> *The experts in home nursing themselves would look at well what are the common kinds of ailments or conditions that could be, that registered nurses have the expertise, with the use of a clinical support tool, to be able to prescribe so that those patients do need to go and access the healthcare system, either through their family physician, or end up sitting in Emerge for hours.*

Increased job satisfaction and professional value were also cited as benefits by many, as it was thought there would be significant RN interest in working to full scope, increasing their contribution to the care team, and providing more complete, timely and continuous care to their clients. Participants also suggested that RN prescribing could improve health service coverage given the shortage of physicians in the province and that RNs are in clients' homes seven days a week. A few of these participants suggested the coverage improvements could be especially beneficial in rural and remote areas. Interestingly, however, a few participants working in more rural areas did not see as many benefits there and had some concerns around the lack of interdisciplinary teams within which RN prescribing could occur.

One participant was not in favour of RN prescribing being considered for home care in B.C. This person felt strongly that it would not have any benefits.

5. DISCUSSION

The purpose of this research was to explore the elements of RN prescribing that would need to be considered if RN prescribing were introduced in British Columbia. The literature review covered evidence from international nurse prescribing practice in the element categories adapted from the CNA's framework. The 17 interviews conducted for this research delved into deeper detail on these elements of RN prescribing, while also identifying other important themes for consideration. This research is an attempt to contribute to discussions about how RNs' scope of practice could be

developed to include prescribing in home care settings, with the ultimate objectives of better access to timely care for home nursing clients, and a more efficient and responsive health system.

All but two participants indicated support for an RN prescribing role to be considered for the home nursing context in B.C. Both of those who did not support it felt prescribing, especially in the home care context, required too much advanced knowledge, diagnosing and applied skills to be brought in below the NP level, however one did not see a need while the other thought it should not be part of the nursing role. Those in favour of RN prescribing consideration showed varying mid to high levels of support and enthusiasm. They did raise some hesitations and cautions, the majority in the form of aspects requiring careful study, consultation, and robust structures and education, rather than as insurmountable barriers or red lines.

The results of this research are discussed by each category of design element, drawing together current literature and expert interview input. In general, there tended to be shared opinions at the higher level for most elements, with the interviewers' professional practice and perspective drawing out more nuanced and diverse themes. Where one or two participants had a unique insight or experience, but the response rate was not high enough for the three-response threshold, these comments are discussed for the additional depth they offer to the consideration of RN prescribing.

5.1 Scope of Practice

The literature review found that RN scope of practice is meant to be reviewed over time, allowing responsiveness to client needs and reflecting the level to which RNs are actually practising (ICN, 2013). The interviews indicated that there are likely enough factors in place for such a scope review to occur for RNs in B.C., as home care clients are in need of increased access to care, a system-wide shift to expand home care is occurring, and RNs are often providing medications and informally advising on prescribing, testing, and treatment courses of action. While different models of RN prescribing are in place around the world and in Canada there is no consensus around whether RN prescribing should be an entry-to-practice or post-RN skill (CNA, 2015), the interviews clearly, and fairly emphatically, showed cross-professional support for RN prescribing to be a post-RN skill. It is likely that there would be greater receptivity in decision-making circles to considering RN prescribing at the post-RN level, in recognition of the complex nature of prescribing in general, and of the level of complexity, frailty and polypharmacy seen in home care specifically.

Basic RN educational requirements are already numerous and challenging – CRNBC (2013) has established 104 competencies a nursing student must achieve, in addition to meeting the standards of practice – and graduates are not emerging with consistently strong competence. Because of the importance of establishing client safety and the complexity of the prescribing skill and knowledge base, RN prescribing should be considered as a post-RN skill. The post-RN level could be considered as necessary to assure well-developed skills, build specialized knowledge and critical thinking, and standardize levels of practice-specific competence.

Enabling RNs to prescribe would require amendments to the HPA, regulations and standards of practice, which could be considered as a process requiring significant time and genuine consultation with the full range of healthcare profession stakeholders. Consideration of legal and regulatory change could start

with the development and acceptance of a definition of RN prescribing. Because of the absence of an agreed upon definition and model of RN prescribing (Kroezen et al., 2011; Kroezen et al., 2012; Jones, 2009; CNA, 2015), questions around prescribing parameters were intentionally kept broad, and the interviews confirmed that health professionals' thinking varies widely. There are diverse opinions about the varieties of prescribing and the many factors that consideration entails. In fact, participant responses most closely aligned around acknowledging just how difficult prescribing parameters are to determine, and that if RN prescribing were to proceed, it would involve much expert analysis and interprofessional dialogue.

This research indicates that any definition developed could have greater appeal within nursing if it used the language of "prescribing" as opposed to dispensing or providing without an order. The definition could also encompass certain diagnostic tests, equipment and treatments in addition to the prescribing of pharmaceuticals. Contrary to what was anticipated by the researcher, participants rarely raised a schedule of drugs as the level of prescribing parameter to be considered. It became clear that rather than thinking of RNs being able to prescribe from a wide array of options based on their own clinical assessment and diagnosis, participants were more supportive of RN prescribing that was tied to a closely defined health situation or that employs some form of decision support tool. Also important to participants was that RN prescribing be considered for as a nursing service for stable, less complex clients, that was aligned with current nursing practice such as wound care, or that was an acute exacerbation within a context familiar to RNs, such as a UTI. The attention to client stability and acuity aligns with the new RN prescribing model that is in progress in Alberta (CARNA, date TBD).

This scope of RN prescribing differs in degree from the independent level of prescribing in place in the U.K. (Courtenay, 2007). It does align, however, with the structure for RN prescribing developed in the CNA's Framework. Both the literature review and expert interviews indicated there are a number of different RN prescribing models that could work, and deciding on the right fit for B.C. may be best determined in response to client needs and gaps in current service delivery. Specific parameters around what could be prescribed for in which situations, and any limitations regarding the client's acuity or complexity, would need careful discussion by regulatory bodies and professionals with expertise in both pharmacology and the specific health concerns common in home care. As various levels of prescribing are well instituted in the U.K., including in the home care setting, there is evidence and learning to be drawn on (Latter & Blenkinsopp (2011). Those involved in developing prescribing definitions and parameters would be well served by being prepared for considerations in this area to be challenging and intricate, likely requiring management of diverse and in some cases conflicting positions and approaches.

5.2 Education and Experience

If RN prescribing is determined as a post-RN skill, then there would need to be consideration of how to best bring RNs up to the level of knowledge, competency and confidence necessary to prescribe safely and effectively. One part of this could be requiring a minimum amount of practical experience in the home care setting before entering the program. Another could include instituting a requirement for continuing competence supported by well-developed continuing professional development opportunities (Nuttall, 2007). There is strong interest from health professionals in seeing the entry-level

core competencies fully integrated and progressed before introducing additional, complex, and practice-specific competencies.

Given the complexity of the home care population and the level of competence needed to maintain client safety in the independent context of the client's home, RN prescribing may be best considered as requiring formal education at the university or college level. The educational program would need to be robust enough to provide RNs with a solid grounding in pharmacology, assessment, diagnostic testing, medication management, safe prescribing practices, and recognizing when a client's complexity or interplay of medications might require consultation or referral to another health care professional. At the same time, care could be taken that the extent of education does not become prohibitive, or so advanced that an RN might as well undertake the NP course of education.

Participants echoed the emphasis on specialized education and clinical experience in the literature (Meadows & Procuik, 2012; Kroezen et al., 2012; (Martiniano et al., 2014), with their consideration of this topic tending to focus more on ensuring the quality of the education program and its graduates than the educational details themselves. Any educational program being developed would need to include consideration of a supervised clinical component, where RNs would be supervised in prescribing and receive a review of their decisions and feedback on their prescribing activities. This would help ensure the transition from theory to application, develop mentoring relationships, and support safe prescribing as well as confidence and uptake in RNs. Consideration could also be given to incorporating interdisciplinary modules into the education program so that RNs can learn from other prescribers and be prepared to work effectively in a multi-professional prescribing environment. Participants noted this would also be a way to support different healthcare professionals learning from the same theory base.

There was less theme agreement around the actual model of education than was observed in other RN prescribing elements, perhaps reflecting that a variety of education models from which to draw are employed internationally as well as within existing nursing practice in B.C., such as for certified practice (Kroezen et al., 2012; CRNBC, 2016a). The array of potential educational model options could be considered within the principle of advanced competency, with an emphasis on understanding the prescribing activity within the other pharmaceutical and health conditions at play, and at a level below the extensive education NPs get to be able to prescribe whatever their practice setting or client population. The length, level and content of the education needed will be dependent on the prescribing parameters determined. For example, initiating a new prescription will require different skills and understanding than renewing or adjusting an existing prescription. Within this context, regulatory bodies may want to work closely with employers and educational institutions to determine which educational model is most appropriate for the level of prescribing scope that is established.

5.3 Oversight and Accountability

Within the oversight and accountability element, accountability did not arise as a controversial topic. The research showed that professional accountability and responsibility are well-established in nursing practice and that nurses tend to have a clear understanding of what is outside of their scope and therefore something they cannot and do not do. There was also a sense that establishing the actual documents and guidelines around accountability was something that CRNBC would need to do, and that it would be beneficial at the health authority and employer level too, but that it was more part of their

regular type of work than something requiring extraordinary consideration. The emphasis within this area was on the need for clarity in defining roles and communicating how these changes would impact each profession's day-to-day work.

More consideration was given to how oversight should be established. The ability to consult with a physician or NP was seen as fundamentally important, and in most cases it was considered on a discretionary basis assuming that the RN would recognize when it was needed. Given the experiences that were recalled with physician resistance to the introduction of NPs, consideration could be given to a formal or regulatory duty for physicians to provide consultation for RNs prescribers. Physician resistance to sharing some of their scope should be anticipated (Bradley & Nolan, 2007; Jones & Edwards, & While, 2011; CNA, 2015), and plans to mitigate concerns and develop trust and support could be integrated throughout the process of considering and developing RN prescribing. Careful consideration could be needed around how to formalize communication strategies so RN prescribers are getting the feedback and support needed and to ensure their prescribing activities are meeting the safety standards. This could be especially the case in a setting known to have a number of complexities around client conditions, and multiple care providers delivering services for the client in different settings.

5.4 Implementation and Uptake

The need for adequate support at all stages of RN prescribing from pursuing advanced education to continuing competence was a theme that was often reiterated. Adequate supports ensure RNs who would be good prescribers are enabled to pursue the role, are able to be confident in using their scope in the field, and will continue to do their job well as time goes on. Inadequate support from other healthcare providers, insufficient mentoring, and lack of organizational or financial support to take the time away from work to pursue education can all create barriers to RNs becoming prescribers (van Soeren & Micevski, 2001; Ziegler et al., 2015; Courtenay & Carey, 2009; Lim et al., 2013).

To avoid or at least mitigate interprofessional conflict, a process for open communication, developing role clarity, and consultation in planning stages may be beneficial (Meadows & Prociuk, 2012), and could lead to garnering genuine acceptance. There is recognition that physicians and NPs need to be adequately educated and engaged to develop willingness to support RN prescribers, however there is concern that this might be done in a way that minimizes RNs' own stake. In some areas, there is already some discontent present as RNs are perceived to be underrepresented or less influential in high level decision and policy making circles. To ensure these full-circle supports meet the needs of RNs entering prescribing practice, RNs could be recognized as having a central role in all aspects of the process of developing RN prescribing legislation, scope and overall implementation.

This research found a strong interest in RN prescribing boing considered in the context of interdisciplinary cooperation, which studies show could help support the vigilant drug monitoring and prudent medication use that helps elderly home care clients avoid adverse events (Doran et al., 2013). There is also indication there is RN readiness to prescribe for diabetes patients in Canada, based on RNs perceiving value in prescribing, feeling confident in their competence to do so, and being willing to pursue the necessary additional education (MacKenzie, 2012).

5.5 Challenges

Implementing RN prescribing would involve much more than legal authorization, education, and practice supports; carefully considering the operational details in advance to ensure a smooth implementation process would be key. Consultation, forethought, and a testing cycle could be critical to prevent known and as-yet unknown challenges from derailing RN interest in prescribing, and address potential safety concerns. This would include integrating the tools and methods for RNs to conduct prescribing activities into systems well in advance, from the appropriate 'prescription pad' to new MSP billing processes, to ways for physicians and NPs to keep informed of RN prescribing activities for shared clients. It could also involve conducting a needs assessment as a first step, to understand what service gaps exist for home care clients across B.C. and how RN prescribers might be able to fill this gap to improve health and reduce hospitalizations.

Interprofessional conflicts may arise when professional boundaries are being negotiated during the course of a profession taking on a new role. To minimize and manage potential conflict as nurses start to enter a domain traditionally belonging solely to physicians, there could be formal dialogue between physicians and nurses, and their attitudes could be carefully examined throughout the development and implementation process. Physicians may also be receptive to having fewer interruptions and reduced workload on the trailing edge of their scope (Bradley & Nolan, 2007). A gradual and stepped approach could help ease any territorialism as nurses enfold a medical component into their scope of practice (Ben-Natan, 2015).

5.6 Benefits

RN prescribing could help support the principle of *the right provider at the right time and right place* (CNA, 2015). It could lead to earlier interventions as the RN could identify the issue and begin testing and treatment quickly, without needing to connect with a physician to get an order or prescription. Participants expressed an interest in ways RN prescribing could prevent the serious consequences of the 'cascade' effect, whereby one health incident causes other exacerbations that drastically reduce an elderly client's health and limit his or her ability to recover to previous levels of quality of life. One participant described their observations of RN prescribing in the U.K. as "a fundamental component of that kind of wrap-around response service and meeting the acute episodic needs of the clients in the community." In this way, participants noted RN prescribers could improve client health through reduced likelihood of a hospital visit, more timely access to care, and better quality care overall.

Evidence from jurisdictions where RN prescribing is in place shows that clients experience high levels of satisfaction and have easier access to care (Courtenay et al., 2010; Bhanbhro et al., 2009). In the U.K., studies have shown that patients like the continuity of care that RN prescribers provide, as well as the holistic approach and comprehensive information shared (Courtenay et al. 2011a; 2011b). In addition to noting the potential to increase client satisfaction, participants in this research felt that prescribing could lead to higher RN job satisfaction. This could occur through enabling RNs to work to their full capabilities, presenting an opportunity for professional advancement, streamlining how they provide care to their clients, and increasing their sense of value within the care team. Mensik (2007) suggests that the greater control of nursing practice is a key reason that home care nursing appeals to RNs, so

enhancing control through an RN prescribing competence may in turn increase the satisfaction of RNs working in the home care environment.

6. CONCLUSION & FURTHER CONSIDERATIONS

The intention of this report was to review the elements of an RN prescribing program that would need to be considered for RNs to be enabled to prescribe for home care clients in B.C. This research found that prescribing could be considered as a post-RN skill that interested RNs with a certain amount of practical experience could pursue through additional education, including a robust pharmacology component. Different scopes of practice exist for RN prescribers around the world and there is no consensus on the parameters that could be established in B.C. regarding what could be ordered or prescribed, in what health situations, and at what level of renewing or initiating. Support from physicians, NPs, other healthcare professionals and employers was seen as a factor critical to the successful implementation of RN prescribing, but building physician acceptance was also seen as the central challenge to address.

A variety of benefits to authorizing RN prescribing were found, including increasing client access to care, improving health outcomes through earlier intervention, and increasing health system efficiency through reducing costs and utilizing RNs to their full scope. These benefits were identified as achievable in the Canadian and B.C. context as well, and initial research indicates a level of readiness for RN prescribing in certain specialty areas. A similar assessment of RN readiness to prescribe in B.C.'s home care context could provide a foundation from which to further consider enabling this increase in scope of practice.

Setting these findings in the context of B.C.'s strategic priorities establishes an impetus for more formal consideration of RN prescribing to occur. Steps moving forward could include an assessment of home care clients' access to care needs at the regional level, and quantitative study of the potential to reduce hospitalizations and use healthcare resources more efficiently. For work in this area to begin, the development of a shared definition of RN prescribing would be key. This could be approached in an interdisciplinary manner that engages all relevant healthcare professions from the initial conversation to implementation and evaluation. Expanding RN scope to include prescribing in home care would be a large undertaking in an area relatively undeveloped in Canada, but with significant potential benefits echoed internationally and by home nursing experts in B.C. It is hoped this report could contribute to framing initial stakeholder discussions, should enabling RN prescribing for home care clients in B.C. be formally considered.

7. REFERENCES

Allan, D., Funk, L., Reid, R., & Cloutier-Fisher, D. (2011). Exploring the influence of income and geography on access to services for older adults in British Columbia: A multivariate analysis using the Canadian community health survey (cycle 3.1). *Canadian Journal on Aging/Revue Canadienne Du Vieillissement, 30*(1), 69-82.

Avery, A., Savelyich, B., & Wright, L. (2004). Doctors' views on supervising nurse Prescribers. *Prescriber, 15*(17), 56-61.

Ben-Natan, M. (2015). Registered nurses, nurse specialists and physicians have a neutral to moderately positive view on nurse prescribing, though physicians still have patient safety concerns. *Evidence-Based Nursing, 18*(2), 60-60.

Bhanbhro, S., Drennan, V., Grant, R., & Harris, R. (2011). Assessing the contribution of prescribing in primary care by nurses and professionals allied to medicine: A systematic review of literature. *BMC Health Services Research*, *11*(1), 330-330.

Bradley, E., Campbell, P., & Nolan, P. (2005). Nurse prescribers: who are they and how do they perceive their role? *Journal of Advanced Nursing, 51*(5), 439-448.

Bradley, E., & Nolan, P. (2007). Impact of nurse prescribing: A qualitative study. *Journal of Advanced Nursing, 59*, 120-128.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Braun, V., & Clarke, V. (2014). What can "thematic analysis" offer health and well-being researchers? *International Journal of Qualitative Studies on Health and Well-being, 9*, 1-2.

British Columbia. (2016a). Community Nursing. Retrieved from http://www2.gov.bc.ca/gov/content/health/accessing-health-care/home-community-care/care-options-and-cost/community-nursing

British Columbia. (2016b). Nursing (registered). Retrieved from http://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/professional-regulation/nursing-registered

British Columbia. (2016c). Scope of practice reform. Retrieved from

http://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/professional-regulation/scope-of-practice-reform

British Columbia Ministry of Health. (2014). *Setting priorities for the B.C. health system.* Retrieved from http://www.health.gov.bc.ca/library/publications/year/2014/Setting-priorities-BC-Health-Feb14.pdf

British Columbia Ministry of Health. (2015a). Home and community care client counts and service volumes 2005/06 to 2013/14.

British Columbia Ministry of Health. (2015b). *Delivering a patient-centred, high performing and sustainable health system in B.C.: A call to build consensus and take action.* Retrieved from http://www.health.gov.bc.ca/library/publications/year/2015/delivering-patient-centred-health-BC.pdf

British Columbia Ministry of Health. (2015c). Primary and community care in BC: a strategic policy framework. Retrieved from http://www.health.gov.bc.ca/library/publications/year/2015/primary-and-community-care-policy-paper.pdf

Canadian Institute for Health Information. (2015a). *HCRS profile of clients in home care, 2014-15*. Retrieved from https://www.cihi.ca/en/quick-stats?pageNumber=1&resultCount=10

Canadian Institute for Health Information. (2015b). Regulated nurses, 2014: RN/NP data tables. Retrieved from https://secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC2898&lang=en

Canadian Nurses Association. (2013). *Registered nurses: Stepping up to transform health care.* Retrieved from https://www.cna-aiic.ca/~/media/cna/files/en/registered_nurses_stepping_up_to_transform_health_care_e.pdf

Canadian Nurses Association. (2015). *Framework for registered nurse prescribing in Canada.* Retrieved from https://www.cna-aiic.ca/en/professional-development/rn-prescribing-framework

Carey, N., Courtenay, M. & Burke, J. (2007). A national evaluation of supplementary nurse prescribing in dermatology. *Journal of Clinical Nursing, 16*, 1230–1237.

Carey, N., Courtenay, M., & Stenner, K. (2013). The prescribing practices of nurses who care for patients with skin conditions: A questionnaire survey. *Journal of Clinical Nursing, 22*(13-14), 2064-2076.

Carey, N., & Courtenay, M. (2010). An exploration of the continuing professional development needs of nurse independent prescribers and nurse supplementary prescribers who prescribe medicines for patients with diabetes. *Journal of Clinical Nursing, 19*(1-2), 208-216.

College and Association of Registered Nurses of Alberta. (date TBD). *RN Prescribing and Ordering Diagnostic Tests: Requirements and Standards (Draft)*. Retrieved from http://nurses.ab.ca/content/dam/carna/pdfs/DocumentDrafts/Draft-Prescribing-Ordering-DTs-Requirements-and-Standards.pdf

College of Registered Nurses of British Columbia. (2013). *Competencies in the context of entry-level registered nurse practice in British Columbia.* Retrieved from https://crnbc.ca/Registration/Lists/RegistrationResources/375CompetenciesEntrylevelRN.pdf

College of Registered Nurses of British Columbia. (2015). Registered Nurse. Retrieved from https://crnbc.ca/WhatNursesDo/TypesOfNurses/Pages/NursePractitioner.aspx

College of Registered Nurses of BC. (2016a). Certified practice. Retrieved from https://www.crnbc.ca/Standards/CertifiedPractice/Overview/Pages/Default.aspx

College of Registered Nurses of BC. (2016b). *Legislation relevant to nurses' practice*. Retrieved from https://www.crnbc.ca/Standards/Lists/StandardResources/328LegRelevanttoNursesPractice.pdf

College of Registered Nurses of BC. (January 27, 2016c). *Scope of practice for registered nurses*. Retrieved from https://www.crnbc.ca/Standards/Lists/StandardResources/433ScopeforRegisteredNurses.pdf

Courtenay, M. (2010). Nurse prescribing and community practitioners. *Journal of Family Health Care (20)*3, 78-80.

Courtenay, M., Carey, N. & Burke, J. (2007a). Independent extended and supplementary nurse prescribers, their prescribing practices and confidence to educated and assess prescribing students. *Nurse Education Today, 27*(7), 739-747.

Courtenay, M., Carey, N., & Burke, J. (2007b). Independent extended and supplementary nurse prescribing practice in the U.K.: A national questionnaire survey. *International Journal of Nursing Studies, 44*, 1093-1101.

Courtenay, M., Carey, N. & Burke, J. (2007c). Independent extended nurse prescribing for patients with skin conditions: A national questionnaire survey. *Journal of Clinical Nursing, 16,* 1247–1255.

Courtenay, M., & Carey, N. (2008a). Nurse independent prescribing and nurse supplementary prescribing practice: National survey. *Journal of Advanced Nursing*, *61*(3), 291-299.

Courtenay, M. & Carey, N. (2008b). Preparing nurses to prescribe medicines for patients with diabetes: A national questionnaire survey. *Journal of Advanced Nursing, 61*(4), 403-412.

Courtenay, M. & Carey, N. (2008c). The prescribing practices of nurse independent prescribers caring for patients with diabetes. *Practical Diabetes International, 25*(4), 152-157.

Courtenay, M., Carey, N. & Stenner, K. (2011a). Non-medical prescribing leads views on their role and the implementation of non-medical prescribing from a multi-organisational perspective. *BMC Health Services Research, 11,* 142.

Courtenay, M., Carey, N., Stenner, K., Lawton, S. & Peters, J. (2011b). Patients' views of nurse prescribing: Effects on care, concordance and medicine taking. *British Journal of Dermatology, 164,* 396–401.

Crooks, V., Agarwal, G., & Harrison, A. (2012). Chronically ill Canadians' experiences of being unattached to a family doctor: A qualitative study of marginalized patients in British Columbia. *BMC Family Practice, 13*(1), 69-69.

Doran, D., Hirdes, J., Blais, R., Baker, G., Poss, J., Li, X., & McIsaac, C. (2013). Adverse events associated with hospitalization or detected through the RAI-HC assessment among Canadian home care clients. *Healthcare Policy /Politiques De Santé, 9*(1), 76-88.

Drennan, J., Naughton, C., Allen, D., Hyde, A., O'Boyle, K., Felle, P.,… Butler, M. (2010). Patients' level of satisfaction and self-reports of intention to comply following consultation with nurses and midwives with prescriptive authority: A cross-sectional survey. *International Journal of Nursing Studies, 48*(7), 808-817.

Edwards, R., & Holland, J. (2013).*What is qualitative interviewing?*. New York; London;: Bloomsbury Academic.

Gielen, S., Dekker, J., Francke, A., Mistiaen, P., & Kroezen, M. (2014). The effects of nurse prescribing: A systematic review. *International Journal of Nursing Studies, 51*(7), 1048-1061.

Green, A., Westwood, O., Smith, P., Peniston-Bird, F., & Holloway, D. (2009). Provision of continued

professional development for non-medical prescribers within a south of England strategic health authority: A report on a training needs analysis. *Journal of Nursing Management, 17*, 603-614.

Holland, J. & Ramazanoglu, C. (1994). Coming to conclusions: Power and interpretation in researching young women's sexuality, in M. Maynard and J. Purvis (eds) Researching Women's Lives from a Feminist Perspective , London: Taylor & Francis.

Institute for Healthcare Improvement. (2016). The IHI Triple Aim. Retrieved from http://www.ihi.org/engage/initiatives/tripleaim/Pages/default.aspx

International Council of Nurses. (2013). *Scope of nursing practice position statement.* Retrieved from http://www.icn.ch/images/stories/documents/publications/position_statements/B07_Scope_Nsg_Practice.pdf

Jones, A. (2009). *Nurse Prescribing in Mental Health.* Chichester, U.K; Ames, Iowa;: Wiley-Blackwell.

Jones, K., Edwards, M., & While, A. (2011). Nurse prescribing roles in acute care: An evaluative case study. *Journal of Advanced Nursing, 67*, 117-126.

Joseph, A., & Phillips, D. (1984). Accessibility and utilization: Geographic perspectives on health care delivery. New York: Harper and Row.

Kroezen, M., Dijk, v., L, Groenewegen, P., & Francke, A. (2011). Nurse prescribing of medicines in Western European and Anglo-Saxon countries: A systematic review of the literature. *BMC Health Services Research, 11*(1).

Kroezen, M., Dijk, v., L, Groenewegen, P., & Francke, A. (2012). Nurse prescribing of medicines in Western European and Anglo-Saxon countries: A survey on forces, conditions and jurisdictional control. *International Journal of Nursing Studies, 49*(8), 1002-1012.

Kroezen, M., Dijk, L. van, Groenewegen, P., Rond, M. de, Veer, A. de, Francke, A. (2014). Neutral to positive views on the consequences of nurse prescribing: Results of a national survey among registered nurses, nurse specialists and physicians. *International Journal of Nursing Studies, 51*(4), 539-548.

Latter, S., & Blenkinsopp, A. (2011). Non-medical prescribing: Current and future contribution of pharmacists and nurses. *International Journal of Pharmacy Practice*, *19*(6), 381-382.

Latter, S., Maben, J., Myall, M., & Young, A. (2007). Evaluating nurse prescribers' education and

continuing professional development for independent prescribing practice: Findings from a national survey in England. *Nurse Education Today, 27*, 685-696.

Latter, S., Blenkinsopp, A., Smith, A., Chapman, S., Tinelli, M., Gerard, K., Dorer, G. (2011). *Evaluation of nurse and pharmacist independent prescribing*. University of South Hampton and Keele University. Retrieved from: http://eprints.soton.ac.uk/184777/3/ENPIPfullreport.pdf

Lim, R., Courtenay, M., & Fleming, G. (2013). Roles of the non-medical prescribing leads within organisations across a strategic health authority: Perceived functions and factors supporting the role. *International Journal of Pharmacy Practice*, *21*(2), 82-91.

MacKenzie, S. (2012). What is the readiness of registered nurses who provide care for patients with diabetes in a primary care setting for registered nurse prescribing?. Thesis – School of Nursing, Faculty of Health Sciences, University of Ottawa. Retrieved from https://www.ruor.uottawa.ca/bitstream/10393/23128/3/MacKenzie_Shelley_2012_thesis.pdf

Martin-Misener, R. (2010). Will nurse practitioners achieve full integration into the Canadian health-care system? *Canadian Journal of Nursing Research*, *42*(2), 9-16.

Martiniano, C., Coêlho, A., Latter, S., & da Costa Uchôa, S. (2014). Medication prescription by nurses and the case of Brazil: What can we learn from international research? *International Journal of Nursing Studies*, *51*(8), 1071-1073.

Mason, J. (2006). *Six strategies for mixing methods and linking data in social science research, Real life methods NCRM node working paper.* Qualitative Researching, London: Sage, 2nd edn.

Meadows, C. A., & Prociuk, J. (2012). Integrating licensed practical nurses into home care nursing: One health authority's journey. *Home Healthcare Nurse, 30*(5), 273-279.

Mensik, J. (2007). Impact of organizational attributes on nurse satisfaction in home health. *Home Health Care Management & Practice, 19*(6), 456-459.

Nuttall, D. (2007). Self-assessing competence in non-medical prescribing. *Nurse Prescribing, 11*, 510-514.

Stenner, K., & Courtenay, M. (2008). Benefits of nurse prescribing for clients in pain: Nurses' views. *Journal of Advanced Nursing, 63*, 27-35.

Stenner, K., Carey, N., & Courtenay, M. (2009). Nurse prescribing in dermatology: Doctors' and non-prescribing nurses' views. *Journal of Advanced Nursing, 65*, 851-859.

Thrasher, C., & Purc-Stephenson, R. (2007). Integrating nurse practitioners into Canadian emergency departments: A qualitative study of barriers and recommendations. *CJEM : Journal of the Canadian Association of Emergency Physicians, 9*(4), 275.

United Kingdom Department of Health. (2006). Improving patients' access to medicines: A guide to implementing nurse and pharmacist independent prescribing within the NHS in England. Retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4133743

Van Ruth, L., Mistiaen, P., Francke, A., 2008. Effects of nurse prescription drugs: A systematic review. *Internet Journal of Healthcare Administration, 5*(2).

Van Soeren, M., & Micevski, V. (2001). Success indicators and barriers to acute nurse practitioner role implementation in four Ontario hospitals. *AACN Clinical Issues, 12*(3), 424-437.

Wilkinson, R. & Marmot, M. (2003). *Social determinants of health: The solid facts.* World Health Organization, Denmark, 2nd edn.

Wong, S., Farrally, V., Canadian Electronic Library (Firm), & Michael Smith Foundation for Health Research. (2014). *The utilization of nurse practitioners and physician assistants: A research synthesis*. Vancouver, British Columbia: Michael Smith Foundation for Health Research.

Woodward, C. A., Abelson, J., Tedford, S., & Hutchison, B. (2004). What is important to continuity in home care? *Social Science & Medicine, 58*(1), 177-192.

Ziegler, L., Bennett, M., Blenkinsopp, A., & Coppock, S. (2015). Non-medical prescribing in palliative care: A regional survey. *Palliative Medicine*, *29*(2), 177-181.

8. APPENDIX

Interview Questions – Revised V1

***Please note that these questions all refer to RN prescribing in the <u>home nursing</u> context.**

1. Can you give me an overview of your background and current role in the home nursing field?
    a. *Probe: How long have you worked in this area?*
    b. *Probe: Were you originally educated as a nurse?*

<u>Scope of Practice</u>

1. RN prescribing could be developed in two ways – as post-RN skill or as a skill that would be basic to all RNs in the future. Are there advantages you see to developing RN prescribing one way over the other?
    a. *Probe: For example, do we need all RNs, or just some, to be able to prescribe?*
    b. *Should this be something all RNs should be capable of doing?*
2. What parts of the health care system would need to change in order to expand RNs' scope of practice to include prescribing?
    a. *Probe: For example, the legislation, regulation, standards of practice, academic nursing programs, payment structures, etc.*

<u>Challenges and Benefits</u>

3. What challenges could there be with enabling RNs to prescribe for home care clients in BC?
    a. *Probe: For example, are there conflicting opinions between health care professionals you've heard discussed?*
4. What could be the benefits to clients and health care workers of enabling RNs to prescribe?
    a. *Probe: For example, regarding access to medical professionals, allowing health professionals to practice to the full level of their capability, etc.*

<u>Prescribing Parameters</u>

5. What health conditions experienced by home nursing clients do you think RNs could better support if allowed to prescribe?
    a. *Probe: Are there common conditions that RNs have difficulty supporting because the needed prescriptions are not readily accessible to the client via a doctor or NP?*
    b. *Probe: Are there conditions and treatment plans that home nurses are familiar with or that may be 'routine' enough that they don't require a physician's assessment?*
6. What do you think the limits should be on the medications that RNs could prescribe if allowed?
    a. *Probe: Consider types of medication, amounts, refills versus new prescriptions, area of practice, etc.*

Education & Experience

7. What kind of education and/or experience requirements should be put in place to enable RNs to prescribe?
    a. *Probe: What kind of length, structure or content would provide the necessary expertise? Is there a point at which training is "too much" and becomes a barrier?*
    b. *Probe: E.g. Specialized training? Practicum hours? A certain number of years?*

Oversight and Accountability

8. What would appropriate levels of autonomy and accountability look like for RN prescribers?
    a. *Probe: Consider reporting relationships, role of doctors, where credit or responsibility falls, etc.*

Implementation and Uptake

9. What key elements of an RN prescribing system would encourage or support RNs to become prescribers?
    a. *Probe: What kind of concerns would you anticipate from RNs? Eg. adequate preparation to prescribe confidently, compensation, hierarchy dynamics?*

Concluding Questions

10. Are there any additional themes or issues you think would be beneficial to consider alongside those already discussed
11. Do you have any final comments?