



Implementation of Registered Nurse Prescribers in Nova Scotia

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Abstract

Registered nurse (RN) prescribing has been successfully implemented globally in various countries, yet it remains a relatively new practice in Canada. RN prescribers have the potential to improve role satisfaction and access to care; however, the implementation of the role is influenced by various change levers that shape its success and integration. This commentary offers perspectives from the Nova Scotia (NS) RN prescribing steering committee and shares the achievement that took place in NS when a learning health system approach was applied. Local experiences were systematically integrated, generating new knowledge with a focus on this new role and the expanded responsibilities of RNs in healthcare teams in NS.

Purpose

Registered nurse (RN) prescribing refers to the ability and authority to prescribe autonomously by RNs who have advanced specialized education in prescribing medications and diagnostics within a defined scope and population of patients and is separate from the prescribing roles of nurse practitioners (NPs) (Ladd and Schober 2018). The role and responsibilities of RNs is constantly evolving to meet the needs of patients, families and communities. Early in 2021, NS Health and

IWK Health, in partnership with Dalhousie University School of Nursing and the Nova Scotia College of Nursing (NSCN), launched a graduate-level certificate program to prepare RNs to practise as an RN prescriber. On January 1, 2022, educated RN prescribers entered the workforce for the first time in the province.

To date, limited information has been disseminated on the implementation. This commentary aims to share perspectives from members of the Nova Scotia (NS) RN Prescribing Steering Committee regarding the implementation of the RN prescribing role. In particular, the iterative journey has been characterized by setting a foundation for change, leveraging data and experiences to inform decisions and maintaining a commitment to rapid learning and improvement – an approach defined as a learning health system.

Introduction

Internationally, RN prescribing dates back to 1994 (Adams et al. 2010; Latter and Courtenay 2004; Maier 2019; Short et al. 2024; Wilkinson 2011), with the overall aim of improving access to healthcare services for patients seeing nurses in primary health. Latter and Courtenay (2004) performed a review a decade after the introduction of the role and found that the model of permitting RNs to prescribe medications was largely positive and was thus explored as a possibility within Canada. The Canadian Nurses Association (CNA) (2015) recommended optimizing the RN role to include prescribing as one way to improve access to care in the spirit of the right provider at the right time and in the right place. Using the success in England as a blueprint, as well as the recommendations and framework created by the CNA, in 2016, a group of provincial nursing leaders began a multi-year exploration. The focus was on optimizing the scope of RNs and ways to improve access to care for NS residents. This group, known as the NS RN Prescribing Steering Committee, was comprised of health system partners, including two large acute and primary healthcare employers, a university school of nursing graduate studies program, the provincial Department of Health and Wellness and the provincial nursing regulatory and licensing body, the NSCN.

This dynamic group demonstrated that changes in nursing are best actualized when system partners work together. The committee began visualizing the necessary components within the NS context to enable RNs to become authorized prescribers within specific populations and for certain conditions, removing the need to wait to access care. In addition, healthcare professionals work within teams, and to work most effectively, these teams must ensure that each role is optimized, complements the roles of others, adapts to meet changing needs and provides safe and quality care. Transitioning RNs to RN prescribers was one approach to achieve this goal.

Setting the Foundation

The foundation for RN prescribing in NS consists of four interconnected elements: *structure*, defines the role and the regulatory framework; *competence*, encompasses the knowledge, skills and judgement needed for safe and ethical practice; *practice*, focuses on professional and collaborative care; and *evaluation*, assesses progress and supports integration into practice environments and teams (Bryant-Lukosius et al. 2016; CNA 2015). Figure 1 illustrates a visual representative of our implementation framework.

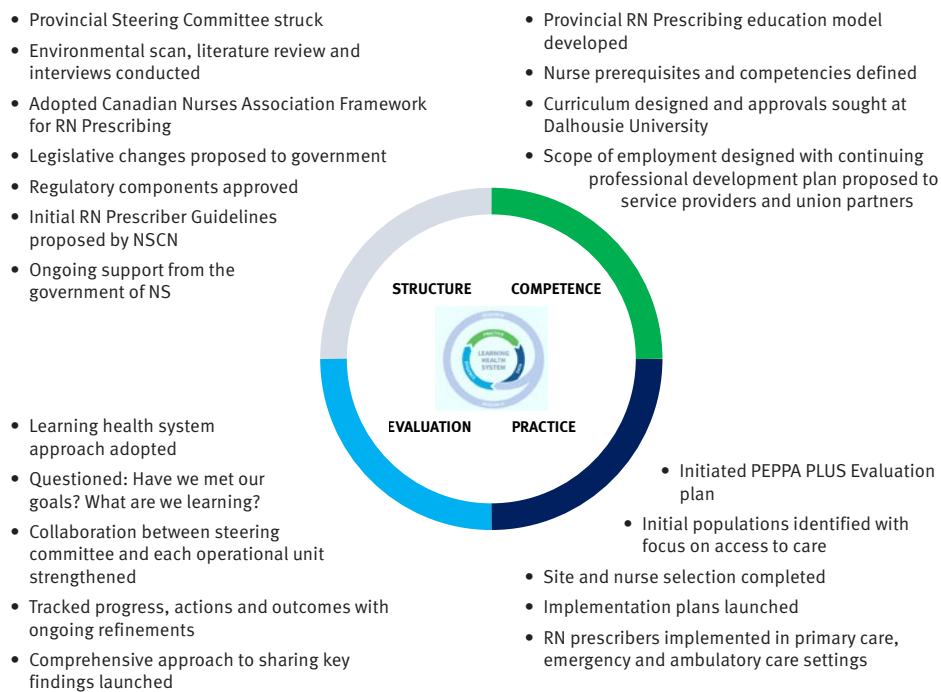
In 2018, the committee members conducted an environmental scan and literature review and developed a communication strategy and RN prescribing education model. Legislative and regulatory changes were required to support this competency, with the NSCN responsible for creating regulations and guidelines for RN prescribing and training. While waiting for the legislation process to be finalized, the committee members established the foundation for RN prescribing in NS, focusing on expanding RN scope, responsibilities and competencies to include authorization to prescribe. Legislation changes were proposed in February 2019 and approved in June 2019, and education and regulatory changes were finalized in the fall of 2019.

Moody et al. (2020) revealed the importance for RN prescribers to have advanced knowledge of pharmacology above what is necessary at the entry-to-practice level and clinical experience in their intended practice setting. The practicum experience helped the developing RN prescriber to practise the skills of prescribing in the context of the population and the advanced knowledge gained in their education (Moody et al. 2020). The advanced pharmacology and clinical experience created the backbone of the education program. Dalhousie University School of Nursing launched its first graduate-level RN Prescribing Certificate Program in January 2021.

The identification of target populations laid the groundwork for addressing health needs of Nova Scotians. Approved practice settings to be trialled by NS Health and IWK Health included primary, emergency and ambulatory care areas. The PEPPA (Participatory Evidence-informed Patient-centered Process for Advanced Practice Nursing Role Development)-Plus Framework (Bryant-Lukosius et al. 2016) guided prioritizing populations and prepared teams for RN prescriber integration. Comprehensive implementation plans were launched, and the first group of RN prescribers joined the workforce in early 2022.

The committee convened and expedited evaluations and decisions on specific time-sensitive matters. Monthly meetings co-chaired by the two employers continued until the spring of 2024, when the provincial committee transitioned

into more of an advisory and monitoring role following the successful implementation of RN prescribing into various clinical settings around the province. New milestones were created that focused on scale and the intentional spread of the RN prescribing role into the larger healthcare system. The NS RN Prescribing Steering Committee re-enforced a learning health system approach where day-to-day experiences were utilized to create a rapid feedback loop for continuous improvement (Nova Scotia Health Innovation Hub n.d.).

Figure 1.**NS approach for implementing RN prescribers**

NS = Nova Scotia; NSCN = Nova Scotia College of Nursing; RN = registered nurse.

NS Healthcare

During the initial RN prescribing implementation, the population of NS was approximately 992,005 (Nova Scotia Department of Finance 2021). Half of the province's population was living in rural communities. The NS perspective mirrors the Canadian context with respect to the high burden of chronic disease management, advancing citizen age and the complexity and acuity of patients requiring acute care services (CIHI 2021). The percentage of NS's population over the age of 65 is 20.8% (CIHI 2021). Currently, this age cohort uses more than 50% of hospital-based care (CIHI 2021).

Given the identification of NS care needs, it has been asserted that an interprofessional team-based approach to care is required, where all providers work collaboratively and at an optimal scope of practice. The RN prescribing strategy and implementation emerged as a key solution to improve access to care and enhance the experiences of patients and providers during and beyond the COVID-19 pandemic. Despite delays in the initial offering of the education, the COVID-19 pandemic became a catalyst for more rapid adoption of RN prescribing. It also provided an opportunity to expand other roles and scopes of practice in NS, including that of the pharmacist prescriber and varied models of care.

The NS RN Prescribing Steering Committee adopted a learning health system approach, using real-time data and feedback to guide decisions. Their focus remained on increasing the autonomy of nursing scope and increasing access to care through RN prescribing. Achieving RN prescribing and other authorized prescriber role integration into healthcare teams was recognized as a crucial component to improve healthcare access and sustainability in NS.

Drivers in Change

The committee needed to move crucial levers to help create the change possible to implement RN prescribing within NS. Several key drivers in change enabled the overall implementation of the role. They included:

- the Provincial Nursing Network (PNN) chaired by the Department of Health and Wellness, who endorsed and provided funding;
- legislation changed to NS *Nursing Act* (Government of Nova Scotia 2020) and regulatory frameworks being established by the NSCN;
- approval by the University Senate and the NSCN of a three-course certificate program at the graduate level for RNs at Dalhousie University School of Nursing;
- clinical teams and leadership at both Nova Scotia Health and IWK Health that were involved in preparatory discussions to address any team conflict and concerns from other authorized prescribers who felt threatened by this new role's implementation;
- nurses willing to pursue advanced education and adapt to real-time refinements;
- the province's Drug Information System expanded to include RNs authorized to prescribe. Provincial prescribing numbers had to be obtained for new RN prescribers;
- the Government of Nova Scotia developing a Health Action Plan whereby data were collected and shared; and
- impactful partnerships with patients, government, nursing unions, regulatory bodies and academic and health partners as being vital to success.

Discussion

Committee members agreed that RN prescribing was timely; relevant; and in keeping with the mission, values and direction of the two employers and other health service providers. This was further supported by the provincial mandate for role optimization within the health workforce and timelier access to care. The committee members reviewed lessons learned for each phase of the implementation. Furthermore, RN prescribing learners and their employers met regularly to discuss facilitators and challenges related to their involvement in the initiative. The PEPPA PLUS Framework (Bryant-Lukosius et al. 2016), aligned with the principles of a learning health system, guided the evaluation process. Investigating the lessons learned, several key conclusions can be drawn.

RN Prescriber Role Implementation

The implementation of RN prescribing between 2020 and 2024 faced challenges due to the COVID-19 pandemic. The first cohort, initially planned for September 2020, was delayed until January 2021. Nurses struggled to balance increased patient care demands with the rigorous graduate-level program, leading to higher attrition rates. Health service managers and Dalhousie University faculty supported learners by extending deadlines for assignments and clinical placement hours.

The implementation of RN prescribing sparked mixed emotions, including excitement as well as concerns, from other prescribers about safety and role ambiguity. Despite efforts to clarify the limited, collaborative scope of RN prescribers compared with NPs, members of the healthcare team often struggled to fully understand these distinctions. This confusion added stress and became a barrier to role acquisition for RN prescribing learners. Regular communications between the RN prescribing learners, employers, faculty and key partners helped to address fears and answer questions. This communication became an opportunity to highlight the extensive work done in creating safe structures, advanced education and regulations, ensuring a well-planned implementation of RN prescribing.

The direct support from the employers' Interprofessional Practice and Learning (IPPL) teams ensured collaborative practice was fostered and was key to successful change management and role implementation. Implementation support such as mentorship provided a clear understanding of the purpose and parameters associated with this new role. Equally important was the continued support by the RN prescribers' health service managers, who were able to facilitate necessary organizational, structural and process changes. These changes included recognition and acceptance by departments such as laboratory services, diagnostic imaging and information management/information technology of the licensed RN prescriber to be able to prescribe and order diagnostics within the provincial systems.

Operating procedures of these departments can be clinical site, or zone specific, instead of standardized across the province, which delays the effective implementation of the RN prescriber role today.

IPPL teams continue to play a critical role in removing barriers to successful RN prescriber implementation. This includes securing alternative solutions to a lack of clinical preceptors in care areas without NPs or physicians, providing clarity and education on the appropriateness of integration of an RN prescriber versus other roles into an interprofessional team and ongoing support with the RN prescribers' transition to practise. Lastly, IPPL teams are monitoring patient outcomes, prescribing patterns and team dynamics, while advocating and communicating efforts with the NS RN Prescribing Steering Committee. The interaction between the two groups continues to guide implementation through our learning health system approach.

Nursing Workforce Trends

A secondary aim beyond access to care and role satisfaction is the retention of nurses in the current system. Healthcare globally is experiencing human resource challenges, with the World Health Organization (WHO) projecting a shortage of 10 million healthcare workers by 2030 (WHO 2024). Nurses represent the largest portion of the workforce in healthcare, with workforce data in 2020 indicating that Canada employs roughly 448,000 nurses (CIHI 2021). The Royal Society of Canada produced a policy briefing in 2022 called *Investing in Canada's Nursing Workforce* and identified several factors associated with poor recruitment and retention, one being a lack of autonomy in nursing roles (Tomblin-Murphy et al. 2022). In addition, in 2022 the Government of Nova Scotia released its *Action for Health: Strategic Plan*. The plan focuses on advancing six core solutions centred on attracting healthcare professionals and progressing the healthcare system to ensure that Nova Scotians receive the best care possible (Government of Nova Scotia 2022).

Conclusion

Advancing RN practice to include RN prescribers increases access to care and optimizes the role of the nurse, resulting in retention and satisfaction. Optimization has been implemented in NS based on the ingenuity of the nursing leaders in the system. Collaboration, determination and a shared understanding allowed NS to successfully implement RN prescribing. This was based on the iterative process, guided by continuous learning and improvement, and using a learning health system approach, emphasizing the collection and use of real-time data and feedback to inform decisions. As RN prescribing matures in our province, we will continue to evaluate the improved healthcare access for patients and greater satisfaction of nurses to guide us into the future.

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