

The Contribution of RNs and NPs to Improved Patient Outcomes



NANB BELIEVES THE KNOWLEDGE, SKILLS AND JUDGEMENT OF ITS 8000+ REGISTERED NURSES (RNs) AND NURSE PRACTITIONERS (NPs) MUST BE BETTER UTILIZED AND FULLY INTEGRATED INTO THE HEALTHCARE SYSTEM, IN ORDER TO IMPROVE THE HEALTH OUTCOMES OF NEW BRUNSWICKERS.

New Brunswick's (NB) health care system is at a crossroads where the number of employed RNs is decreasing and the demands for healthcare services are increasing, due to the aging population and the decreased numbers of students completing Bachelor of Nursing (BN) programs. Between 2008 and 2017, the number of graduates from BN programs in NB fluctuated, from a high of 344 in 2012 to a low of 202 in 2017. Additionally, the RN/NP cumulative growth percentage for NB in 2018 was -0.3%, as shown in Table 1¹ (see page 28).

Research has also shown that greater nurse-to-patient ratio is consistently associated with a higher degree of burnout

among nurses, increased job dissatisfaction and a higher intent to leave the profession,² thus potentially perpetuating the problem of insufficient numbers of RNs in the workplace in New Brunswick. Healthcare facilities, including long term care and home healthcare agencies are feeling fiscal and human resource constraints as the cost of healthcare services augments, the number of RNs entering the system decreases and the rate of RNs retiring, increases.

The New Brunswick Health Council has published a number of reviews highlighting the utilization of and access to health services in our province. Overall their findings demon-

strate there are challenges in accessing health services, unmet homecare needs, including in-home nursing care, and an over-use/dependence on emergency room services.^{3,15}

RNs are the largest group of healthcare professionals in the province and are employed across the spectrum of care. Approximately 64.1% are employed in hospital, 12.3% are in community settings and 10.3% are in nursing homes.⁴

A significant body of research evidence has shown that the presence of RNs and NPs positively influence patient outcomes in long term and acute care sectors.

In hospital settings studies have shown:

- RNs have a positive impact on health and healthcare: improved quality of care; improved patient satisfaction; decreased mortality rates; improved organizational safety; and cost savings.⁵
- an increase of one RN per 10 beds is associated with an 11-28% reduction in death 30 days following a stroke and with an 8-12% reduction one year following the stroke.⁶
- RNs with a rich nursing skill mix were less likely to report common adverse patient events such as falls with injuries, pressure ulcers and urinary tract infections.⁷
- each 10% reduction in the proportion of RNs is associated with a 12% increase in the odds of patient deaths.⁷

Research in the long term care sector has shown:

- the RN role has five major components in nursing homes: clinician, advocate, mentor, leader and supervisor.⁸
- RNs primarily provide indirect care through delegating, organizing and supervising the care provided by other nursing team members, while assessing and monitoring the needs of residents.⁹
- RNs identify and implement best practices and ensure plans of care are relevant and current, including advocating to ensure residents receive appropriate services.⁸
- more direct care by RNs has been linked to improved cognitive functioning, fewer pressure ulcers, hospitalizations and urinary tract infections; less weight loss and deterioration in the ability to perform activities of daily living;^{10,11}
- NPs working in nursing homes supplement existing medical and nursing care.⁸
- the utilization of NPs reduces polypharmacy, the use of anti-psychotic drugs, and emergency department transfers and increases family satisfaction with care.^{12,13}

¹ Canadian Institute for Health Information. (2019). *Nursing in Canada, 2018: A Lens on Supply and Workforce*. Retrieved from <https://www.cihi.ca/sites/default/files/document/regulated-nurses-2018-report-en-web.pdf>

² Shin, S., Park, J.-H., & Bae, S.-H. (2017). *Nurse staffing and nurse outcomes: A systematic review and meta-analysis*. *Science Direct*, 66(3), 273-282. doi: <https://doi.org/10.1016/j.outlook.2017.12.002>

³ New Brunswick Health Council. (2019). *Beyond Satisfaction: Results of the 2018 edition of the Home Care Survey*. Retrieved from <https://nbhc.ca/all-publications/beyond-satisfaction-results-2018-edition-home-care-survey>

⁴ Canadian Institute of Health Information. (2017). *Regulated Nurses*. Retrieved from <https://www.cihi.ca/en/regulated-nurses-2018>

⁵ Punch, D. (2018). *Irreplaceable*. *Registered Nurse Journal*, 30(1), 12-16. Retrieved from https://rnao.ca/sites/rnao-ca/files/RNJ-JanFeb2018-web_v2.pdf

⁶ International Council of Nurses. (2018). *Position statement: Evidence-based safe nurse staffing*. Geneva, Switzerland: Author. Retrieved from https://www.icn.ch/sites/default/files/inline-files/ICN_PS_Evidence_based_safe_nurse_staffing_o.pdf

⁷ Aiken L., Sloane D., Griffiths, P., Rafferty, A., Bruynee, L., McHugh, M.,...Sermeus, W. *Nursing skill mix in European hospitals: cross-sectional study of the association with mortality, patient ratings, and quality of care*. *BMJ Quality & Safety*, 26, 559-568. Retrieved from <https://qualitysafety.bmj.com/content/26/7/559>

⁸ McCloskey, R., Donovan, C., & MacDonald, E. (2018). *RNs in nursing homes: Accepting the challenge and reaping the rewards*. *INFO Nursing*, 49(2), 35-37.

⁹ McCloskey, R., Donovan, C., Stewart, C., & Donovan, A. (2015). *How registered nurses, licensed practical nurses and resident aides spend time in nursing home: An observational study*. *International Journal of Nursing Studies*, 52(9), 1475-1483.

¹⁰ Konetzka, R., Stearns, S., & Park, J. (2008). *The staffing-outcomes relationship in nursing homes*. *Health Services Research*, 43(3), 1025-1042.

¹¹ Horn, S. D., Buerhaus, P., Bergstrom, N., & Smout, R. J. (2005). *RN staffing time and outcomes of long-stay nursing home residents*. *American Journal of Nursing*, 105(11), 58-70.

¹² Klaasen, K., Lamont, L., & Krishnan, P. (2009). *Setting a new standard of care in nursing homes*. *Canadian Nurse*, 105(9), 24-30.

¹³ McAiney, C., Haughton, D., Jennings, J., Farr, D., Hillier, L., & Morden, P. (2008). *A unique practice model for nurse practitioners in long-term care homes*. *Journal of Advanced Nursing*, 62(5), 562-571.

¹⁴ Norful, A., Martsof, G., deJacq, K., & Poghosyan, L. (2018). *Utilization of registered nurses in primary care teams: A systematic review*. *International Journal of Nursing Studies*, 74, 15-23. doi:10.1016/j.ijnurstu.2017.05.013

TABLE 1 *Ten Year Trend in Cumulative Workforce Growth, NB, 2009–2018*

Year	LPN Cumulative Growth	RN (Including NP) Cumulative Growth	NB Population Cumulative Growth
2009	0.0%	0.0%	0.0%
2010	2.7%	3.0%	0.4%
2011	6.4%	4.5%	0.7%
2012	7.3%	5.4%	0.9%
2013	9.7%	4.1%	0.8%
2014	8.7%	2.9%	0.6%
2015	12.2%	1.2%	0.5%
2016	15.0%	-0.5%	1.0%
2017	15.2%	0.2%	1.3%
2018	18.1%	-0.3%	n/a

NOTE: The ten year trend from 2009 through 2018 is from the Health Workforce Database by the Canadian Institute for Health Information from the following source *Nursing in Canada, 2018: A Lens on Supply and Workforce*.¹

TABLE 2 *Perceived NP Contributions to PHC*

NPs	Patients
Accessibility to PHC	Accessibility to PHC
Unlimited number of concerns/visits	Opportunity to discuss multiple health issues
Providing a patient centered approach	Providers partner with patients in health care decisions
Health promotion/education	Health promotion/education
Provision of evidence-based practice for chronic disease management	NP knowledge of medical history and management of health problems

NOTE: NPs and their patients were surveyed regarding what they perceived to be contributions made to primary health care by NPs. This research was done in New Brunswick, Canada by S. Hamilton and T. Rickard, and is captured in the article Nurse Practitioner Outcomes in New Brunswick 2002-2017, *INFO Nursing*, 49(1), 22–24.¹⁵



The contributions to the health and safety of New Brunswickers by RNs and NPs are invaluable, and the evidence of their contribution must be considered by decision-makers who are faced with the need to restructure our health care delivery system. RNs are increasingly embedded into interprofessional primary healthcare teams, playing a large role in the management of chronic diseases such as asthma, diabetes and hypertension. RNs in primary healthcare settings are also involved in care coordination and case management; medication management, including administration of immunizations, medication reconciliation, client-teaching, and adjusting dosages under the authority of a directive; and in research.¹⁴

New Brunswickers whose primary care provider is an NP, reported high satisfaction in their care and that they perceive NPs to make a significant contribution to the healthcare system (see Table 2).¹⁵ The New Brunswick Health Council's *2017–2018 Recommendations to the Minister of Health* solidifies the need to focus on “improving the quality of primary health services and addressing inequities in the provision of those services” (2018, p.7).¹⁶

The Canadian Nurses Association (2012) demonstrates that when RN and NP roles are capitalized upon, there is a direct association with better patient outcomes including reduced smoking, reduced use of alcohol, fewer hospital admissions and decreased length of stay. These outcomes favourably affect health and functional status, mortality rates, use of hospitalization and nursing homes, and costs while improving quality and patient satisfaction.¹⁷

The healthcare team, key decision makers within institutions, government leaders and the public need to understand the RN and the NP scopes of practice and the contributions that they make within the healthcare system. Full implementation of RN scope of practice is associated with employer policies that facilitate RN autonomy, enabling the RN to work to their full scope of practice.¹⁸ New Brunswick's RNs and NPs are well educated, highly trained and experienced professionals who are ready to be active contributors to a revitalized health care system that is sustainable, focused on primary health care and committed to improving the health outcomes for all citizens.

¹⁵ Hamilton, S., & Rickard, T. (2018). *Nurse Practitioner Outcomes in New Brunswick 2002–2017*. *INFO Nursing*, 49(1), 22–24.

¹⁶ New Brunswick Health Council. (2018). *2017–2018 Recommendations to the Minister of Health*. Retrieved from <https://nbhc.ca/sites/default/files/publications-attachments/recommendation-2017-2018-en.pdf>

¹⁷ Canadian Nurses Association (2012). *Effectiveness of Registered Nurses and Nurses Practitioners in Supporting Chronic Disease Self-Management*. Ottawa: Author

¹⁸ Ganz, F., Toren, O., & Fadlon, Y. (2016). *Factors Associated With Full Implementation of Scope of Practice*. *Journal of Nursing Scholarship*, 48(3).