



Rural and Remote Nursing Practice in Canada

*An Updated Discussion Document
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CARRN•I'ACSRÉ

CANADIAN ASSOCIATION FOR RURAL & REMOTE NURSING

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Purpose of document

In 2008, the Canadian Association of Rural and Remote Nurses (CARRN; See Appendix A) Executive wrote “*Rural and Remote Nursing Practice Parameters*” (CARRN, 2008) to generate discussion about the uniqueness of rural and remote nursing practice in Canada. It was anticipated that the original document would provide a framework for the practice expectations and practice setting characteristics and would highlight the essential and integral importance of rural and remote nursing.

A dozen years have passed since the development of “*Rural and Remote Nursing Practice Parameters*.” There has been more research conducted in Canada on rural nursing practice including two national studies (*Nursing Practice in Rural and Remote Canada I & II*, MacLeod et al., 2004; MacLeod et al., 2019, respectively). There has also been research conducted in Canada that has examined nurse practitioners in rural and remote settings (Koren et al., 2010; Roots & MacDonald, 2014), nursing education for rural settings (Yonge et al., 2019), and perennial issues such as retention of rural and remote RNs (Kulig et al., 2015) and LPNs (Nowrouzi et al., 2015).

The purpose of this current document—“*Rural and Remote Nursing Practice in Canada: An Updated Discussion Document*”—is to update the knowledge base of Canadian rural and remote nursing. This document can be used to describe and explain rural and remote nursing practice to others who have not experienced rural and remote health care delivery models. This document is also meant to encourage discussion across international borders about the characteristics and challenges of rural and remote nursing practice in a variety of locales. Decision-makers will benefit from the explanation of the complexity and challenges associat-

ed with rural and remote nursing. This will in turn help them develop and implement meaningful health care policies designed to positively impact the health of rural and remote Canadians and the nurses who care for them. Unlike the first document, this current one includes all regulated nursing groups in Canada. This helps to ensure that there is greater inclusivity of all nursing perspectives across the country who work in rural and remote settings. Clarification of the specific group of nurses that is being referred to is included in each section. A thorough review of this document included sending it to CARRN Executive, experts in rural nursing in Canada and nurses who work in rural and remote settings. A full description of the review process is included in Appendix B.

Defining Rural and Remote

Understanding “what is” rural and remote nursing practice can only be fully grasped if formal definitions of rural and remote are considered. Research studies that focus on rural and remote health issues in Canada, routinely use the *Rural and Small Town Canada* definition—communities that are outside the commuting zone or urban centres with populations of 10,000 or more (du Plessis et al., 2001). This definition has been used to identify participants and groups of nurses who work in such settings. There is no common definition of remote but characteristics such as north of the 60th parallel which refers to all three territories (Nunavut, The Northwest Territories and the Yukon) have been used (Young et al., 2019). This definition however is limited because it does not include the provincial northern areas of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec and Newfoundland and Labrador (Young et al., 2019). For the purposes of this document, both the Territorial and Provincial northern regions are used to define remote. The challenges and debates about the meaning of rural and remote will continue to be ongoing, shaping rural and remote nursing practice as clarifications occur.

While it is recognized that rural and remote differ significantly in terms of specific aspects of practice and setting characteristics, for the purposes of this document—they are identified as one entity. This decision is based on review of the primary defining factors: an inclusive range of practice settings within rural and remote areas, including facility-based nursing, as well as nursing that is primarily located in a community setting.

The Rural and Remote Nursing Practice I Study included an analysis of Registered

Nurses’ (RN) definition of rurality (Kulig et al., 2008). This national multi-methods study included a random sample of rural RNs and all RNs working in remote settings and northern territories. A subsample of 1285 RNs were used to analyze their definitions of rural. There were four themes identified that described rural and remote:

- community characteristics such as limited amenities including banks and stores, small population size, local economy based upon agriculture, fishing, ranching. Rural communities were described as semi-isolated but remote areas were described as isolated or Arctic/northern;
- geographical location including accessibility described in time or mileage with rural communities being 20 minutes to 5 hours away and remote being 45 minutes to 14 hours away from health care facilities;
- health human and technical resources including more limited availability of health resources and limited technology and equipment; and,
- nursing practice for both rural and remote settings included RN being the front-line providers with more extensive responsibilities.

These themes provide a context for the setting in which care is provided by all regulated nursing groups. Clarification of the perceptions of the meaning of rural and remote between these groups would be worthwhile research to conduct. The findings of such studies would have implications for nursing education and policies within each of the regulated nursing groups and may also impact the development and maintenance of collaborative inter-professional teams.

Regulated Nursing Groups

This document refers to all regulated nursing groups in Canada: Registered Nurses (RN), Nurse Practitioners (NP), Registered Psychiatric Nurses (RPN), and Licensed Practical Nurses (LPN) (referred to as Registered Practical Nurses in Ontario).

Table 1 shows the total number of RNs, NPs, and LPNs in direct care per 100,000 in each province for 2010, 2018 and 2019 (CIHI, 2020). The number of NPs in direct care rose across the country from 2010 to 2018, except for Nunavut. By 2019, there were more LPNs in all Provinces except Quebec which has missing data for this year.

Table 2 specifically highlights the number of licenced RNs, NPs and LPNs in urban and rural areas per province and across Canada (CIHI, 2020). Statistics for RPNs are only available in the provinces where they are commonly employed, i.e., Manitoba, Saskatchewan, Alberta, British Columbia and the Yukon. Of the 439,975 regulated nurses in Canada in 2019, 39,502 or 8.98% work in rural areas, with the majority being RNs followed by LPNs. This is in comparison to the 355,724 or 80.9% of regulated nurses who work in urban areas. It should be noted that rural/urban data for NPs and RNs in Manitoba was not available for 2019, therefore, the total percentage of regulated nurses working in rural and remote areas of Canada is under-reported and inaccurate for 2019.

Table 1. Regulated nursing workforce employed in direct care per 100,000 population, per Province, 2010, 2018, 2019*

| PROVINCE | NP | | | RN | | | RPN | | | LPN | | |
|----------|------|------|------|--------|-------|-------|------|------|------|-------|-------|-------|
| | 2010 | 2018 | 2019 | 2010 | 2018 | 2019 | 2010 | 2018 | 2019 | 2010 | 2018 | 2019 |
| NL | 15.1 | 29.1 | 32.6 | 999.4 | 978.6 | 968.7 | | | | 472.4 | 432.9 | 433.4 |
| PEI | 2.8 | 17.0 | 23.5 | 913.5 | 885.5 | 916.2 | | | | 400.3 | 346.5 | 338.0 |
| NS | 10.5 | 17.2 | 20.0 | 844.7 | 846.8 | 854.0 | | | | 368.2 | 414.8 | 421.3 |
| NB | 8.4 | 15.7 | 16.9 | 954.1 | 888.1 | 898.6 | | | | 348.9 | 384.5 | - |
| PQ | 0.8 | 5.7 | 6.2 | 715.1 | 734.1 | 734.0 | | | | 250.8 | 273.3 | 284.5 |
| ON | 10.8 | 20.6 | 22.2 | 639.5 | 604.9 | 617.1 | | | | 223.5 | 304.3 | 321.0 |
| MB | 6.1 | 12.4 | - | 813.9 | 752.4 | - | 65.3 | 62.9 | 61.7 | 220.4 | 230.2 | 240.2 |
| SK | 10.8 | 16.7 | 19.4 | 802.8 | 813.5 | 813.9 | 72.1 | 56.2 | 53.4 | 255.8 | 267.1 | 260.5 |
| AB | 6.4 | 11 | 12.3 | 690.6 | 733.3 | 745.4 | 28.0 | 25.4 | 25.2 | 191.1 | 261.2 | 281.6 |
| BC | 2.4 | 6.9 | 8.4 | 559.1 | 647.5 | 628.6 | 44.5 | 45.1 | - | 177.9 | 210.9 | 215.8 |
| YK | - | 17.3 | 24.7 | 867.2 | 983.3 | 985.8 | - | - | - | 176.3 | - | - |
| NWT | - | - | - | - | - | - | | | | 196.4 | 208.8 | 229.0 |
| NWT/NU | 62.6 | 53.1 | 45.8 | 1222.6 | 866.9 | 712.6 | | | | - | - | - |

*Canadian Institute for Health Information. *Nursing in Canada, 2019 – Data Tables*. Ottawa, ON: CIHI; 2020. Extracted from Table 13.

Table 2: Proportion of Urban vs. Rural Regulated Nurses by Province, 2019*

| PROVINCE | | Total | URBAN | | RURAL/REMOTE | |
|--------------|-----|----------------|----------------|-------------|---------------|-------------|
| | | | Count | Percentage | Count | Percentage |
| NL | NP | 180 | 107 | 59.4 | 73 | 40.6 |
| | RN | 5674 | 4301 | 75.8 | 1373 | 24.2 |
| | LPN | 2313 | 1402 | 60.6 | 908 | 39.3 |
| PEI | NP | 38 | 25 | 65.8 | 13 | 32.3 |
| | RN | 1612 | 1151 | 71.4 | 480 | 28.5 |
| | LPN | 669 | 463 | 69.2 | 206 | 30.8 |
| NS | NP | 201 | 140 | 69.7 | 61 | 30.3 |
| | RN | 9061 | 6892 | 76.1 | 2159 | 23.8 |
| | LPN | 4114 | 2661 | 64.7 | 1453 | 35.3 |
| NB | NP | 135 | 79 | 58.5 | 56 | 41.5 |
| | RN | 7749 | 6196 | 80 | 1553 | 20 |
| | LPN | | | | | |
| PQ | NP | 542 | 443 | 81.7 | 95 | 17.5 |
| | RN | 70217 | 63202 | 90 | 7004 | 10 |
| | LPN | 24415 | 23394 | 95.8 | 1021 | 4.2 |
| ON | NP | 3273 | 2896 | 88.5 | 377 | 11.5 |
| | RN | 97575 | 92400 | 94.7 | 5175 | 5.3 |
| | LPN | 47729 | 43866 | 91.9 | 3862 | 8.1 |
| MB | NP | 217 | | | | |
| | RN | 12955 | | | | |
| | RPN | 968 | 679 | 70.1 | 288 | 29.8 |
| | LPN | 3376 | 2126 | 63 | 1250 | 37 |
| SK | NP | 232 | 110 | 47.4 | 122 | 52.6 |
| | RN | 10637 | 8708 | 81.9 | 1908 | 17.9 |
| | RPN | 712 | 631 | 88.6 | 81 | 11.4 |
| | LPN | 3038 | 2114 | 69.6 | 924 | 30.4 |
| AB | NP | 549 | 514 | 93.6 | 35 | 6.4 |
| | RN | 34372 | 31031 | 90.3 | 3340 | 9.7 |
| | RPN | 1308 | 976 | 74.6 | 332 | 25.4 |
| | LPN | 13546 | 11358 | 83.8 | 2187 | 16.1 |
| BC | NP | 472 | 419 | 88.8 | 53 | 11.2 |
| | RN | 35516 | 33546 | 94.5 | 1952 | 5.5 |
| | RPN | 2680 | 2586 | 96.5 | 93 | 3.5 |
| | LPN | 11821 | 10860 | 91.9 | 948 | 8 |
| YK | NP | 10 | | | | |
| | RN | 476 | 403 | 84.7 | 73 | 15.3 |
| | RPN | 8 | | | | |
| | LPN | 225 | | | | |
| NWT | NP | 46 | | | | |
| | RN | 732 | | | | |
| | LPN | 102 | 35 | 34.3 | 67 | 65.7 |
| Canada | NP | 6,159 | 4,743 | 77.0 | 885 | 14.4 |
| | RN | 300,669 | 247,830 | 82.4 | 24,997 | 8.3 |
| | RPN | 6,050 | 4,872 | 80.5 | 794 | 13.1 |
| | LPN | 127,097 | 98,279 | 77.3 | 12,826 | 10.1 |
| TOTAL | | 439,975 | 355,724 | 80.9 | 39,502 | 8.98 |

*Canadian Institute for Health Information. *Nursing in Canada, 2019 – Data Tables*. Ottawa, ON: CIHI; 2020. Extracted from Table 4.

Note: Approximate 10% of regulated nurses not captured in percentage totals of rural vs. urban due to under-reporting in Manitoba, and suppressed data in the Yukon and NWT.

Rural and Remote Nursing Practice

Nursing practice—either urban or rural—is described as a profession that is based on professional, caring relationships with clients whether they be individuals or communities. The purpose of this section is not to propose a standard definition for rural and remote nursing but more to generate discussions about what is unique about rural and remote nursing practice within all regulated nursing groups.

In 2015, there were approximately six million people living in rural Canada representing 17% of the population in the provinces and 52% of the population in the territories. This population is cared for by 10% of RNs in the provinces and 40% of RNs in the territories (MacLeod et al., 2019). This disparity between population size and number of RNs highlights ongoing inequity of health care resources and options for rural and remote residents. Nurses must deal with these limitations on a regular basis in their practice.

The dominant theme of the characteristics of nursing practice in rural or remote settings in Canada is that it is a complex, generalist practice¹ (MacLeod et al., 2019). It has been well documented that rural nurses have a wide range of advanced knowledge and ability (MacLeod et al., 2019; Medves et al., 2015). They need a broad base of clinical knowledge and practice in multiple clinical areas simultaneously (Shellian, 2002; MacKinnon, 2012) because rural nurses care for a wide age range of patients with a variety of health issues in settings with limited resources, facilities and access to specialists (MacLeod et al., 2019).

Rural RNs have high levels of autonomy with well-developed problem-solving skills (Kulig, et al., 2013). They also have the ability to execute

appropriate decision making related to their independence while having an awareness of their limitations. Rural nurses may also have to do the work of other health care professionals such as laboratory technicians (MacLeod et al., 2019). They must also contend with varying geography, weather and travel conditions (MacLeod et al., 2019). Exposure to diversity in rural nursing experiences and developing expertise over time have been linked to developing confidence and competence among rural RNs (Penz et al., 2019), both necessary attributes to deal with the constantly changing work environment.

Rural nursing care is provided within environments where social inequities are also common (CARRN, 2020). Rural nurses engage in advanced collaborative practice within inter-professional teams (MacLeod et al, 2019) who are on-site or located within their geographic region. Technology has been used to create interdisciplinary teams that virtually connect on a regular basis and discuss patient care (MacLeod et al., 2019). This is not a perfect solution as noted by several of our reviewers who told us that equipment, internet capabilities and knowing how to use the equipment varies across rural and remote settings.

Rural RNs are required to work from a broad scope of practice in rural areas due to geographic isolation, fewer resources and limited support and low population density (MacLeod et al., 2019a). In one recent study, it was found that 85% of rural RNs worked within their full scope of practice (SOP) while 10% worked beyond their scope of practice (MacLeod et al., 2019a). Those working beyond their legislated SOP had even more limited resources and support and greater complexity in the work-

¹ The exception is Registered Psychiatric Nurses (RPN) who focus specifically on mental health, illness and addictions.

place due to the needs of clients (MacLeod et al., 2019b). In contrast, LPNs had a different experience regarding their perceptions of SOP. The majority—77.3%—perceived that they were working within their full SOP according to a recent national study (MacLeod et al., 2019b). However, this same study found that 17.6% perceived that they worked below their full SOP. Given the personnel and resource needs in rural settings, it is important that all regulated nursing groups work to full SOP thereby benefitting rural residents and their communities.

A combination of all the skills held by rural nurses discussed here means that rural and remote residents have increased access to care. Our reviewers gave examples of giving CPR to neighbors while waiting for the ambulance to arrive and working in primary clinics in communities that had no other health services. Access to nursing personnel and health services is a continual concern for rural and remote residents. One particularly relevant example is the current pandemic² and its impact on health care services and resources. There has been an increase in virtual care due to the pandemic and a realization that technology and internet capability is not always available in rural and remote areas. Other impacts of the pandemic, as noted by reviewers, occurs if a nurse in an isolated area becomes ill or is required to be off work to self-isolate due to potential exposure. This creates the potential for the community to have limited or no health personnel and services available to them.

One distinct characteristic of nursing practice in rural settings is that nurses develop a close familiarity with their patients who can also be their neighbors, friends, or family members (Alzghoul & Jones-Bonofiglio, 2020). Confidentiality and trust for patients as people you know, or are family members, leads nurses to become part of the community where they live

and work (Kulig et al., 2009). Simultaneously, there is a heightened awareness and need for confidentiality (Alzghoul & Jones-Bonofiglio, 2020) and professionalism (Zibrik et al., 2010). The designation “nurse” is applied at both work and in the community (Kulig et al., 2009; Macleod, 1998). This becomes more complex for Registered Psychiatric Nurses (RPNs) who may have to counsel both partners or multiple members of families regarding issues such as intimate partner violence. RPNs may have to alter their practice given their closeness or relationships with either group or partner, including how to develop a practice environment to overcome the barrier posed by these relationships.

Diversity and variety are common descriptive threads for clinical settings, community and client demographics and expectations (Blanchett Garneau et al., 2017; Wright, 2015). However, not all rural nurses are fully prepared for the challenges associated with the diverse community landscape. Nurses have noted the need for educational preparation to provide quality care among Indigenous communities for well over a decade (Tarlier et al., 2007). There have been changes in nursing curriculum to address this gap between education and practice (Kurtz et al., 2018) but given our continually changing society, nursing education must keep up with the times and revise curriculum accordingly.

Some rural RNs, who were not from a rural background, found that the geography of the rural landscape and the lifestyle it offers helped them make a transition to adopting the rural community within which they work as a home (Kulig et al., 2009). Furthermore, rural nurses report feeling valued by their community (Shellian, 2002). Rural nurses have a responsive role with the community to develop trust and respect with community members (Tarlier et al., 2003). There is a connectedness with the community which highlights that ru-

² The World Health Organization declared a global pandemic on March 11, 2020 due to the coronavirus, i.e., COVID-19.

ral nurses need to be adaptable. Nurses must also balance professional roles with being community members (Alghoul & Jone-Bonofiglio, 2020). However, for some rural nurses, issues such as isolation and the lack of urban amenities as well as the limited resources on site result in additional recruitment and retention challenges (Kulig et al., 2015).

Rural nursing practice has become increasingly challenging and has been described as having an “underestimated complexity” (MacLeod et al., 2019). Rural nurses care for a broad spectrum of ages from infants to children to adults to the elderly. In addition, rural settings include patients who have co-morbid chronic diseases including diabetes, cardiac conditions, sometimes combined with substance use, similar to their urban counterparts. Rural residents also struggle with other issues such as homelessness (Forchuk et al., 2010). Even though more social and health-related issues have surfaced in rural settings, there has not been a complimentary increase in supports and the number of rural nurses has decreased (Tables 1 & 2).

To add to these changes, rural nurses may be expected to care for patients using therapies for which they have little experience or knowledge and may be the only health care provider available to provide the care. For these reasons,

rural nursing practice has been described as having to perform complex tasks competently but infrequently (Medves et al., 2015).

Given the increased needs of nurses in responding to complicated health care issues in settings that lack infrastructure and resources, it is not surprising that rural RNs experience extremely distressing events at their workplace. A recent national study (Jahner et al., 2020) found that a total of 1,222 nurses representing all regulated nursing groups (RNs: 715; NPs: 61; LPNs: 368; RPN: 78) had experienced an extremely distressing event. Of this group, 65% did not receive psychological support (Jahner et al., 2020).

Other types of distressing events include attending to disasters that befall communities requiring nurses to assist with community recovery (Kulig et al., 2017). In one Canadian study that examined nurses’ roles in disasters, it was found that compared to LPNs and NPs, RNs were 1.5 times more likely to assist and that RPNs were 3 times more likely to assist in a disaster. This study also showed that psychosocial supports are needed for rural nurses who assist with disasters (Kulig et al., 2017). Rural nurses are not only involved with community recovery post-disaster, but also disaster prevention and management (Kulig et al., 2014).

Contribution of Rural and Remote Nursing

Additional research focusing on clarifying rural and remote nursing roles and practice has been conducted but more work is needed.

Since the release of “*Rural and Remote Nursing Practice Parameters*,” there has been an increased recognition of rural and remote RNs and their practice (MacLeod et al., 2019). The

setting and expectations of nursing practice does not minimize the difference that can be made in people’s lives by being true to the goal of nursing—to assist people, families and communities to achieve optimal health wellness and independence (Shellian, 2002). Rural and remote nurses need to value their contribution and realize that they are not “less important”

(Crooks, 2004)—their practice has unique and meaningful characteristics. There also needs to be an increased awareness of the value and necessity of a rural and remote nursing component in basic nursing education and opportunities to develop and refine the specialty of rural nursing at a post graduate level. There remains a need to ensure that resources are available for rural nurses as they engage with individuals and communities in co-developing care that positively impacts health status and outcomes in rural and remote communities.

Nurses have been the backbone of primary care (PC) in rural settings for over five decades (Martin-Misener et al., 2020). Canadian rural nurses engage in primary care most often in remote settings (Martin-Misener, et al., 2020). Nurses in these settings are responsible for a broad range of primary care services and engage with community members to positively impact the social determinants of health (Butler & Exner-Pirot, 2018; CARRN, 2020).

In Canada, nurse practitioners (NP) have additional education including graduate studies and nursing experience beyond a basic level (CNA, 2019). They first appeared in Canada in the 1960s working predominantly in rural and remote areas. In the 1990s, Ontario was the first province to put in place legislation that allowed NPs to admit, treat and discharge hospital inpatients. Since then, all provincial and territorial bodies have legislation that supports NP practice. Their combination of education and skills allows them to autonomously diagnose and treat illness; order and interpret tests; prescribe medications and perform medical procedures (CNA, 2019). In general, NPs work from autonomous practice models (Edge et al., 2019) and may work with specific groups of clients such as seniors (Prasad et al., 2014), or with clients who have specific types of health issues such as diabetes (Heale, Wenghofer et al., 2018) or attend to a full range of clients with a variety of conditions (Heale,

Dahrouge et al., 2018; Martin-Misener et al., 2010). NPs are also referred to as working in advanced nursing practice.

NPs are twice as likely to work in rural and remote settings in Canada compared to RNs (Canadian Institute for Health Information [CIHI], 2020). It is no surprise that NPs assist residents in rural and remote settings to access a more comprehensive range of health care services (Roots & MacDonald, 2014). Within their full scope of practice (SOP) according to legislation and professional regulations, NPs provide health care beyond a traditional medical model and include health promotion and illness prevention (Canadian Federation of Nurses Unions [CFNU], 2018; Roots & MacDonald, 2014). This type of care is particularly suited for vulnerable people who experience geographic and cultural barriers (CFNU, 2018). One study among rural women in northern Ontario showed a high level of satisfaction with the collaborative relationship that was developed between the women and the NP (Leipert et al., 2011). One other study demonstrated shorter wait times to see practitioners, improved access to primary care and better connections between practice and community resources (Roots & MacDonald, 2014).

Despite the passing of years, a 1998 quote which defined rural and remote practice as *“the skills and expertise needed by practitioners who work in areas where distance, weather, limited resources and little back up shape the character of their lives and professional practice”* (MacLeod et al., 1998, p. 72) is still relevant in 2020. Rural nurses require *“the skill set of a multi-specialist who is adaptable to change and different ways of working”* (Medves et al., 2015, p 7). They provide nursing care in a variety of settings, across the life span with a holistic people-centered approach always mindful of the community strengths and limitations (MacLeod et al., 2019).

A Way Forward

Rural nursing practice can be daunting given the lack of personnel, limited technology support and health challenges such as pandemics. There are external factors such as geography, isolation and weather that impact nursing personnel as they provide care. It can also be rewarding and fulfilling for those who choose this area of nursing.

The reviewers of this document expressed their concern about the inequity of services between urban and rural and remote settings. If nurses in rural and remote settings are going to achieve collaborative, high quality care that benefits clients and communities, several issues need to be addressed.

An overarching issue is the educational preparation of nurses who work in rural and remote settings. A website scan of Canadian rural nursing courses and programs was completed in January 2020 (Appendix C). In total, 53 nursing baccalaureate programs and 1 licensed practical nursing programs were reviewed indicating that only seven programs specifically identified rural nursing content. In some geographic areas, specifically nursing programs in more northern areas i.e., UCollege of the North (Manitoba), Lakehead University (Ontario) and Nunavut Arctic College (Nunavut), content on northern health is included. There are only two institutions that offer certificate programs on rural (UNBC) and remote (Aurora College in partnership with UVictoria) nursing and three other nursing education programs (ULethbridge; URegina; USaskatchewan) that provide stand-alone coursework on rural issues. An evaluation of nursing programs for all regulated nursing groups across Canada would be warranted to fully understand the extent of content offered on rural and remote nursing. Rural curricular content in Schools of

Nursing is not captured currently in the Canadian Association of Schools of Nursing (CASN) database (personal correspondence C. Baker, Feb 18, 2020), which is an omission that could be rectified.

Rural and remote nursing constitutes a unique practice that requires all regulated nursing groups to be educated with knowledge and skills that would better prepare them to work in rural and remote settings. There has been a greater emphasis in Baccalaureate nursing education to include information about working with diverse groups, including Indigenous peoples, many who reside in rural and remote settings (Kurtz et al., 2018). This is a positive step, but nurses must also understand and respond appropriately to ethical issues within rural settings where relationships between nurses and clients are influenced by personal connections (Alghoul & Jones-Bonofiglio, 2020; MacLeod et al., 2018; Zibrick et al., 2010).

Rural nursing education is not only about theoretical concepts but involves clinical nursing practice. Team-based preceptorship has been found to be effective in assisting nursing students transition to the role of a rural-based professional network (Yonge et al., 2013). Whether or not this notion translates to all regulated nursing groups needs to be investigated.

All regulated nursing groups need to practice nursing in a manner that demonstrates cultural safety, cultural awareness, cultural competence, and cultural humility in caring for diverse groups who reside in rural settings (Burns et al., 2019; Foronda et al., 2016; Jardine & Lines, 2018; MacLeod et al., 2018; Wright, 2015). Members of diverse groups hold expectations that care will be provided in a collaborative manner that ensures social justice

occurs. Some Baccalaureate nursing programs have increased content about cultural safety education pertaining to Indigenous peoples (Kurtz et al., 2018), but it is unclear if this information is included in the programs of all regulated nursing groups. An inter-related issue is the realization and concern that nursing needs to have a more equitable representation from diverse groups including First Nations (FN) (Kulig et al., 2006). There have been specific initiatives that assist FN students to be successful in completing Baccalaureate degrees in nursing (Kulig et al., 2010). Evaluations of similar initiatives across all regulated nursing groups would be an important task to undertake to gauge success and highlight actions that can be implemented elsewhere.

Canadian rural nurses have described their practice as “Jack of all trades, master of none,” capturing the necessity of being versatile in rural and remote settings (Zibrick et al., 2010). As noted in the literature and confirmed by our reviewers, there are some health issues that are not frequently seen in rural settings. This combined with the infrequent use of necessary skills and equipment to address health issues makes provision of quality care challenging (Medves et al., 2015). One example provided by a reviewer is the increase of clients with co-morbid conditions or clients with multiple addictions. Providing care for clients with mental health issues is another example (MacLeod et al., 2018) which becomes more complicated when there are concomitant conditions such as addictions (Canadian Mental Health Association (CMHA), 2009). Rural and remote clients do not have equitable access to care including a range of mental health providers (i.e., psychologists, psychiatrists) or addiction services that are available to people who reside in urban settings. Nurses may not have the diagnostic or counselling skills to provide care in these circumstances.

Another issue is the lack of infrastructure, including lack of equipment (Medves, et al., 2015)

and technological resources, that are beneficial for rural clients but not always available (Zibrick et al., 2010). If the technological resource is available, issues around the ability to learn how to use the technology and troubleshoot if there are problems are equally important. Addressing concerns about privacy, fear and mistrust are other factors to address (Exner-Pirot, 2018). Reviewers of this document cited lack of technological support as an example of frustration in rural and remote practice. There are examples from Newfoundland where telehealth is used effectively in providing care to clients in remote settings (Jong, 2018). In these instances, telehealth is used for video resuscitation of clients. When done correctly, the client is cared for as if they are in one of the trauma bays. In order for this to be successful, equipment, internet capability, training of the nurse in the remote location and the ability of the helping medical personnel to provide remote support all need to be in place.

In addition, nurses in rural and remote settings need access to communication and online tools that would benefit their care provision and access to further education. One national study that included RNs and LPNs found that 1 in 10 nurses lacked workplace internet access, with workplace web conferencing resources only available in a minority of workplaces (Kosteniuk et al., 2019). This same study also found that barriers to continuing education online still exist among rural nurses including poor internet connections, and heavy workloads reducing time for online learning.

Nurses who choose to work in rural and remote settings need support in their role from those in their immediate work environment and from their agency which is likely physically situated elsewhere. Managers for rural health facilities may not be of a nursing background which can impact how services and care are developed and implemented.

Rural and remote settings are more isolated and lack amenities and resources. For nurses who work in these communities, their safety, including the potential to experience violence, and security can be compromised while providing care. Supports such as policing are also limited in these settings creating a further challenge in ensuring the safety of nursing personnel.

There has been little attention given to the mental health of rural and remote nurses who experience trauma related to their job. Being with clients—who may also be neighbors, friends and relatives—when they are very ill or injured or may not survive takes a toll on the nurse. Vicarious trauma and PTSD are being recognized as more commonplace in their everyday work (Jahner et al., 2020). Initiatives to assist the nurse in dealing with their own mental health vulnerability and symptoms are essential and may be linked to retention of nurses in rural and remote settings.

Policies that guide health care delivery are needed that are rooted in a rural lens. For too long, rural residents have felt that their experiences and lives are not considered within current health policies that are urban-centric (Canadian Rural Revitalization Foundation, 2015). Accessibility to services, limited infrastructure, geographic distance are barriers experienced by residents and known by decision

makers (Timmermans et al., 2011). Despite this awareness, rural and remote residents see the resources and number of nursing personnel dwindle and they wonder about their access to health care services. The proportion of nursing personnel is declining in relation to the rural population (MacLeod et al., 2017); decision makers need to acknowledge this issue and importantly need to work with nursing leadership to address it. Furthermore, the document, *Knowing the Rural Community: A Framework for Nursing Practice in Rural and Remote Canada*, introduces a framework that guides rural and remote nursing practice (CARRN, 2020). It can be used and implemented by ministries and agencies who are responsible for designing and implementing care and services for rural and remote residents.

There is an urgent need to understand the context and experiences of all regulated nursing groups who work in rural and remote Canada. More research that focuses on the full range of topics with these different groups is imperative. CARRN has the opportunity to work with all regulated nursing groups to develop research agendas and priorities. Plans to engage with political leaders and decision makers to advocate for research funding that focuses specifically on rural nursing and inter-related rural health issues can be undertaken by leadership from all regulated nursing groups in Canada.

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Appendix A

Development and Purpose of the Canadian Association for Rural and Remote Nursing (CARRN)

In 2002, a group of Canadian nurses proposed a rural and remote nursing network be organized through the emerging group membership structure of the Canadian Nurses Association. Over the course of two years, a small group of interested nurses implemented a variety of strategies to connect with rural and remote nurses across Canada to assess and generate interest with nurse colleagues for a national group that would connect nurses practicing in rural and remote settings.

In 2003, the Canadian Association for Rural and Remote Nursing (CARRN) achieved associate group status under the auspices of the Canadian Nurses Association (CNA) and held the first general meeting in June 2004. In the ensuing time period, CARRN has focused on championing rural nursing research and providing a forum for rural and remote nurses. For more information about CARRN go to www.carrn.com.

Objectives of CARRN include:

- To promote the development and dissemination of standards of practice for rural and remote practice
- To facilitate communication and networking
- To present the views of the CARRN to government, educational, professional and other appropriate bodies.
- To explicate the evolving roles and functions of rural and remote nurses
- To identify and promote educational opportunities
- To promote the conduct and dissemination of research
- To collaborate with the key stakeholders on the development of sound health policy for those living in rural and remote Canada.

Appendix B

The Review Process

In total, 30 experts reviewed this current document. This group consisted of the CARRN Executive and experts in rural and remote nursing who comprised the Committee responsible for the overall initiative of creating the *Knowing the Rural Community: A Framework for Nursing Practice in Rural and Remote Canada* and updating the original (2008) Parameters document. In addition, an external advisory group was developed through invitations to nursing professional bodies. All efforts were made to ensure there was representation of all four regulated nursing groups. At the time of the request for the review, all reviewers were sent the 2008 Parameters document, the revised document and a specifically designed feedback request sheet. All comments and feedback were read and applied in the revision of the document.

The 30 reviewers represent significant expertise in nursing and in rural and remote nursing practice. The group included 15 Nurse Practitioners, 12 Registered Nurses, 1 Licensed Practical Nurse and 2 Registered Psychiatric Nurses. On average, they had worked in the nursing profession for 26 years with an average of 15 years in rural and remote settings. Nineteen also lived in rural and remote settings. The group worked in a variety of roles including Primary Care, Longterm Care, Home care, Population and Public Health, Academic roles and Regulation of their Profession. The group lived in a variety of locations across Canada with 9 from Saskatchewan, 5 each from British Columbia and Alberta, 3 from Manitoba, 2 from Ontario and one each from New Brunswick, Newfoundland, the Yukon, and Nova Scotia.

Appendix C

Summary of Website Scan: Canadian Rural Nursing Courses/Programs, 2020

Submitted to CARRN in March 2020 and updated Sept 2020 by Dana S. Edge, PhD, RN

Background

In November 2019, CARRN members discussed how to respond to the *Rural Road Map for Action* (2017) that had been developed by The College of Family Physicians of Canada, Advancing Rural Family Medicine, and the Society of Rural Physicians of Canada. As part of our discussion related to educating nurses to work in rural areas, it was suggested that we update our knowledge of rural nursing courses/programs by doing a scan of Canadian educational institutions. This summary provides results from that updated scan.

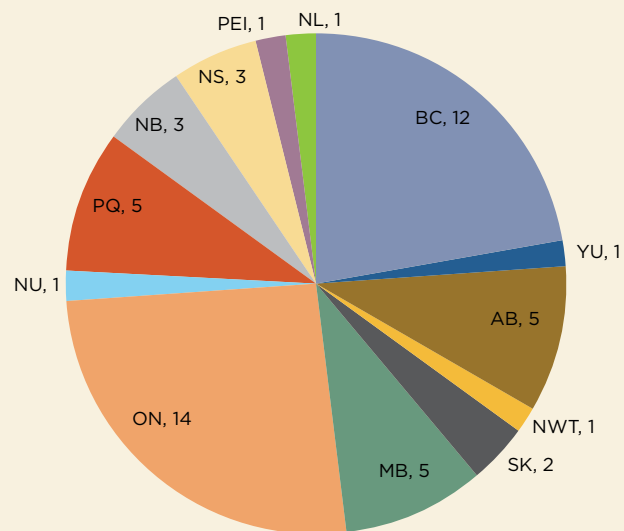
Approach

The list of nursing programs accredited by CASN by province/territory formed the initial starting point of the search in January 2020. Each program was tabulated alphabetically into an EXCEL workbook, with spreadsheets labelled by jurisdiction. Additional educational institutions were added to provincial/territorial listings by searching the Internet. Each educational institution's website and program of study was examined for: a) identification of a rural nursing stream or program; b) rural nursing courses; c) mention of rural nursing clinical practicums; and, d) faculty research interests.

Results

A total of 53 nursing baccalaureate nursing programs and 1 licensed practical nurse (LPN) program were reviewed (see Figure 1 for national distribution). Of these, only eight programs, or 15%, specifically identified rural nursing content on their websites (Table 1).

Figure 1. Number of baccalaureate nursing programs (n=53) by province/territory and Yukon LPN program (n=1), 2020



Impressions

Dedicated course work in rural nursing are limited in Canada. Only two institutions have certificate programs focused on rural (UNBC) or remote (Aurora College) nursing, both in northern educational settings. Threaded curriculum that focused on northern health was found in three additional programs, all located in communities considered to be “north” (UCollege of the North; Lakehead University; and, Nunavut Arctic College). The three nursing programs with stand-alone coursework with rural content are located in the southern

Table 1. Identified Canadian nursing programs with rural nursing content (n=8), 2020

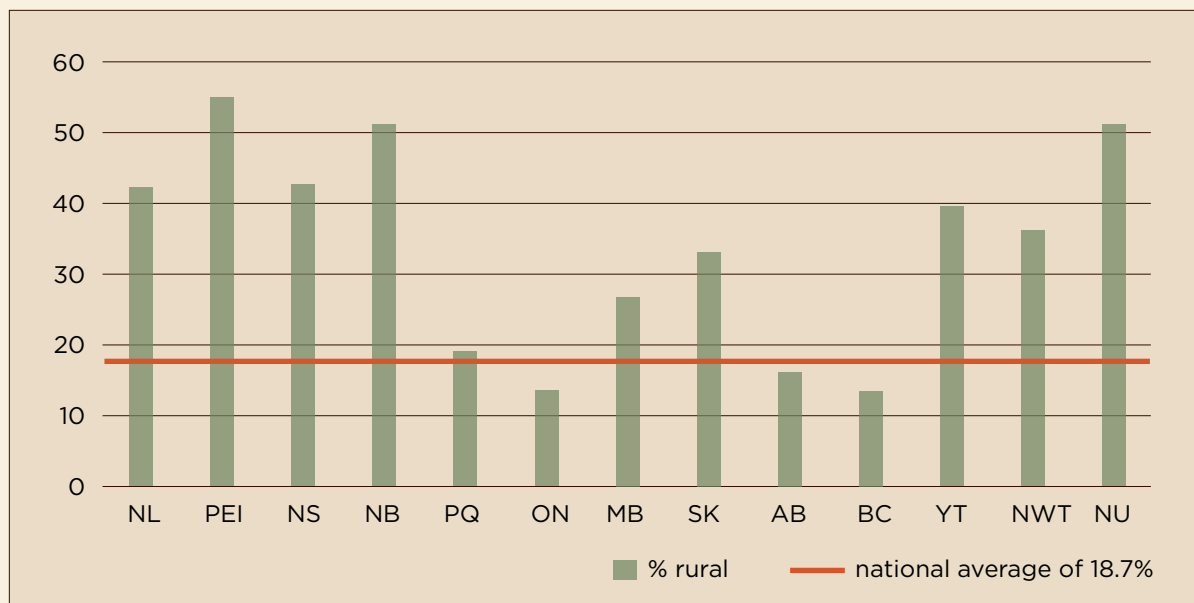
| LOCATION | EDUCATIONAL INSTITUTION | PROGRAM/COURSE | NOTES: |
|--|--|---|--|
| Prince George, BC | UNBC | Rural Nursing Certificate | New program is planned: <i>Northern Baccalaureate</i> ; will require rural/remote suitability questionnaire for admission to program |
| Yellowknife, NWT | Aurora College (UVic) | Post-Graduate Certificate in Remote Nursing | Requires 3 week on-site practical testing in Yellowknife |
| Lethbridge, AB | Univ. of Lethbridge | Clinical Option (BN): Nurs 4530- Rural Nursing Practice Required Course (BN after degree): Nurs 2269- Rural Nursing Practice | |
| Regina, Saskatoon, & Swift Current, SK | Univ. of Regina & Saskatchewan Polytechnic | Course: CNUR-402: Health promotion with senior adults & rural and remote populations | |
| Saskatoon, SK | University of Saskatchewan | Elective: NURS 478.3: Rural Nursing | Located in "approved electives, 4th year" |
| The Pas & Thompson, MB | Univ. College of the North (U of Manitoba) | Curriculum focus on the North | While website refers to the focus on the north, the course descriptions are not specific to "rural" or "north" |
| Thunder Bay, ON | Lakehead University | Focus on Northern Health Issues | Also has a Native Nursing entry program |
| Iqaluit, Nunavut | Nunavut Arctic College (Dalhousie) | Curriculum designed for Nunavut, and called "Arctic nursing" | |

regions of Alberta and Saskatchewan (ULethbridge; URegina; USaskatchewan).

The total rural population in Canada in 2016 was 6.75 million people, or 18.7% of Canadians (Statistics Canada, 2020). A tally by province and territories illustrates the huge variation in the proportions of rural residents across the nation (Figure 2). Interestingly, the Atlantic provinces along with Nunavut have more than 40% of their residents living in rural regions. Provincial proportions should be viewed with caution, as they provide only one facet of the picture. For example, of those 6.75 million Canadians who were considered rural in the 2016 census, 3.45 million or 52.5% resided within Ontario and Quebec. Interestingly, only one nursing program from these two provinces was identified that had a focus on rural and remote nursing.

While nursing programs may not have dedicated courses in rural nursing, it is highly probable that students are exposed to rural communities and settings in their clinical practicums in most jurisdictions. From the scan, the author identified nurse researchers who indicated an interest in rural health or rural nursing on faculty websites. These individuals likely use rural exemplars in teaching baccalaureate and practical nurses in clinical and classroom settings. Finally, the geographical location of a program and the clinical backgrounds of faculty members undoubtedly shapes the context of teaching, and provides experiential opportunities for learning about rural health and nursing, even if rural nursing content is not present in curricular documents.

Figure 2. Percentage of rural residents by province/territory, calculated by author from Statistics Canada 2016 data table



Limitations

Institutions were not contacted directly to verify results of the scan; as the author restricted the scan to institutional websites, information in this report is limited to what was listed on the website related to program focus or course descriptions. Additional information and detail about rural health content could be uncovered from course syllabi or from direct communication with faculty/administration.

As the word “rural” has similar spelling and usage in both French and English, all francophone nursing program websites were reviewed. However, author has no working proficiency in French, and it is possible that descriptions outlining course-work related to rural nursing were missed.

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- The College of Family Physicians of Canada. (2017). *Final report. Summit to improve health care access and equity for rural communities in Canada. The Rural Road Map for Action*. Toronto: Author.

Resources

UNBC

- › Rural Nursing Certificate: <https://www.unbc.ca/nursing/rural-nursing-certificate>
- › Northern Baccalaureate Nursing Program: <https://www.unbc.ca/nursing/rural-nursing-certificate>

Aurora College

- › Post Graduate Certificate in Remote Nursing: http://www.auroracollege.nt.ca/_live/pages/wpPages/ProgramInfoDisplay.aspx?id=125&tp=PRG

University of Lethbridge

- › Program Planning Guide, list of BN courses: https://www.uleth.ca/sites/ross/files/imported/ppgs/2019-20/nurs_bn.pdf
- › Faculty of Health Sciences website: <https://www.uleth.ca/healthsciences/bn>

Saskatchewan Polytechnic/University of Regina

- › Year 4 courses: <https://www.sasknursingdegree.ca/scbscn/year-4/>
- › General website, Faculty of Nursing: <https://www.uregina.ca/nursing/programs/index.html>

University of Saskatchewan

- › Year 4 approved elective: <https://nursing.usask.ca/documents/programs/BSN-PDBSN-restricted-electives.pdf>
- › College of Nursing website: <https://nursing.usask.ca/programs/bachelor-of-science/organization.php>

University College of the North

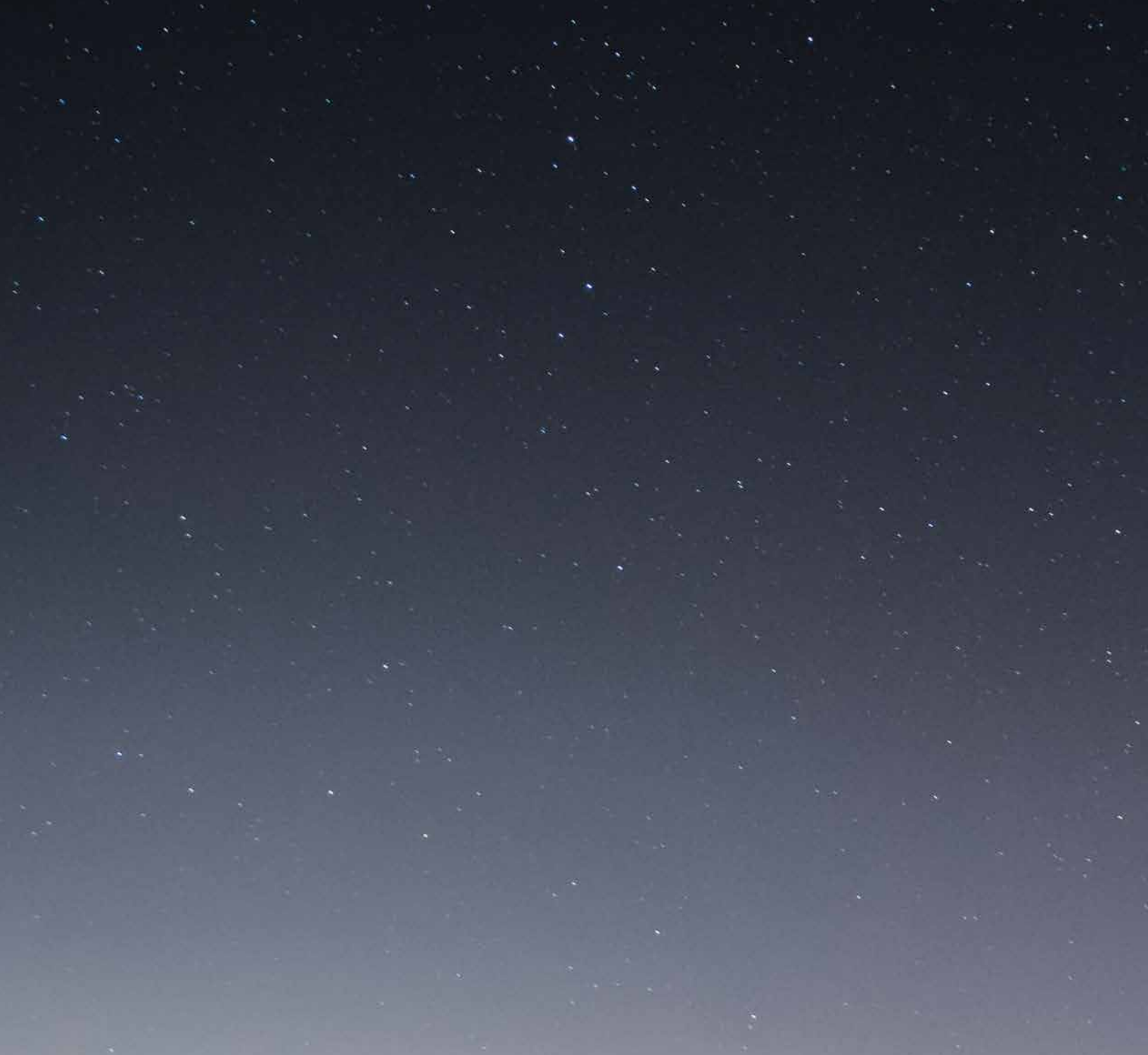
- › General website: https://soar.ucn.ca/ICS/Programs/Degree_Programs/Bachelor_of_Nursing
- › Calendar info: <https://soar.ucn.ca/ICS/Programs/>

Lakehead University

- › General website: <https://www.lakeheadu.ca/programs/undergraduate-programs/nursing/node/1571>
- › Nursing courses: <http://csdc.lakeheadu.ca/~Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=26&topicgroupid=25218>

Nunavut Arctic College

- › Program Description: <https://arcticcollege.ca/health>
- › Course descriptions: <https://static1.squarespace.com/static/5b1954d75cfd798b94327249/t/5b4649a11ae6cffb586868f5/1531333054653/Bachelor+Of+Science+In+Nursing+%28BScN%29+%28Arctic+Nursing%29.pdf>



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