Nursing Practice in Rural and Remote Canada II

Alberta Survey Fact Sheet

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The multi-method study, *Nursing Practice in Rural and Remote Canada II (RRNII)*, aims to provide insights into the work lives and practice experiences of registered nurses (RNs), nurse practitioners (NPs), licensed/registered practical nurses (LPNs), and registered psychiatric nurses (RPNs) in rural and remote communities in all Canadian provinces and territories. The study is intended to inform policy and practice decisions regarding nursing service capacity (nursing personnel and activities) and access to care in rural and remote Canada (http://www.unbc.ca/rural-nursing).

This survey partially replicates and considerably extends a national, cross-sectional survey of rural/remote RNs and NPs undertaken in 2001-2004, The *Nature of Nursing Practice in Rural and Remote Canada (RRNI)* (MacLeod, Kulig, Stewart, Pitblado, & Knock, 2004). The present *RRNII* survey places greater emphasis on primary health care (PHC) and includes all regulated nurses – NPs, RNs, and LPNs – who practice in all provinces and territories, and RPNs, who practice in the four western provinces as well as the territories. This provincial fact sheet presents initial results from the national survey about the nature of nursing practice in rural/remote Alberta (hereafter rural AB), including how nurses experience accessibility and quality of PHC in their workplace.

Figure 1.

A mail survey was distributed primarily through the nursing associations/regulatory bodies in each province and territory between April 2014 and September 2015. The questionnaire was sent to a target sample of nurses who resided in the rural areas (less than 10,000 core population) of each Canadian province and to all nurses who worked in Nunavut, Northwest Territories, and the Yukon.

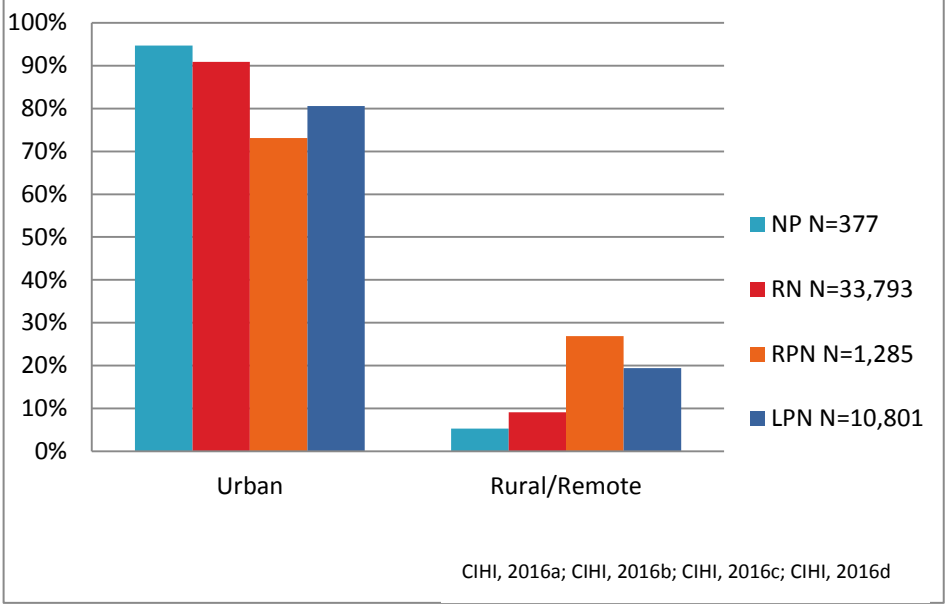
We received a total of 3,822 completed questionnaires by mail or on-line (2,082 RNs, 163 NPs, 1,370 LPNs, and 207 RPNs) from across Canada. The national response rate was 40% (margin of error 1.5%). **From Alberta, a total of 344 nurses responded: 167 RNs, 5 NPs, 127 LPNs, and 45 RPNs**. The eligible sample for AB was 995 individuals and the response rate was 34% (n=344,

margin of error 4.9%). We can say the following: with 95% confidence, the sample of rural RNs, NPs, LPNs, and RPNs in AB is representative of rural AB nurses as a whole; and say with below 85% confidence, the separate samples of rural RNs, NPs, LPNs, and RPNs are representative. In this fact sheet, we compare three sets of data: rural AB nurse data from the *RRNII* survey, rural Canada nurse data from the *RRNII* survey, and data for all AB nurses from the Canadian Institute for Health Information analysis of the 2015 regulated nursing workforce database (CIHI, 2016a). The CIHI data helps to situate the *RRNII* study findings in the context of the overall AB nursing workforce.

Who are the rural nurses in Alberta?

In 2015, the rural population of AB accounted for 19% of the total population with 12% of the province's 46,256 regulated nurses (RNs, NPs, LPNs, and RPNs) working in rural or remote settings (CIHI, 2016a). The geographic distribution of nurses in AB is illustrated in **Figure 2**.

Figure 2. The Regulated Nursing Workforce in AB by Nurse Type and Geographic Distribution.



CIHI, 2016a; CIHI, 2016b; CIHI, 2016c; CIHI, 2016d

Despite a near 41% increase in the AB regulated nursing workforce since 2006 (34,748), the proportion of rural AB nurses has declined over the last decade (CIHI, 2016b; CIHI, 2016c & CIHI, 2016d). The majority of rural AB nurse respondents (56%) in the *RRNII* survey reported growing up in a community with a population of less than 5,000. Of those currently working in a rural community, 60% reported living in their primary work community. Rural AB nurses living outside of their primary work community commonly traveled to work on a daily (56%) or weekly (36%) basis with travel time typically equal to, or under, 7 hours per week (80%). The large majority of rural AB nurses were married or living with a partner (77%); the minority with dependent children (43%).

Age and Gender

In the *RRNII* survey results, only 23% of rural AB nurses were under 35 years of age, compared to 19% of rural nurses in Canada overall; whereas 35% were 55 years of age or older, compared to 32% of rural nurses in Canada overall. These percentages are different from all nurses in AB overall (34% and 21%) (CIHI, 2016a). The proportion of rural AB LPNs under the age of 35 was substantially higher (33%) than that of rural AB RNs (22%), RPNs (7%), and NPs (0%), and compared to rural LPNs in Canada overall (22%). See **Table 1** for an age distribution of rural nurses in Canada and AB.

In the *RRNII* survey, the proportion of all male nurses (RNs, NPs, LPNs, and RPNs combined) working in rural AB (6.7%) was close to that of rural male nurses in Canada overall (6.4%). Interestingly, the proportions of male NPs (0%) and LPNs (3.4%) in rural AB were lower than for rural male NPs (3.8%) and LPNs (5.6%) in Canada overall. Conversely, there was a

higher proportion of rural male RPNs in AB (19%) compared to in the four western provinces (15%).

Table 1. Age Distribution of Rural RNs, LPNs, and RPNs in AB and Canada

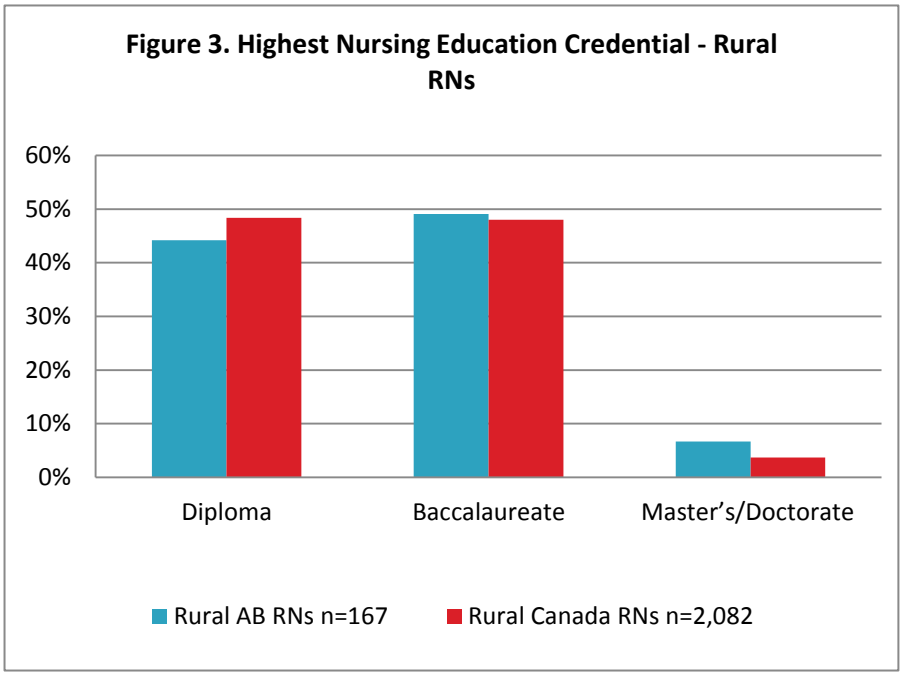
		< 25 %	25-34 %	35-44 %	45-54 %	55-64 %	≥65 %
Rural AB RNs	(n=167)	1.2	20.5	15.5	24.2	34.2	4.3
Rural Canada RNs	(n=2,082)	1.1	17.8	19.1	27.2	29.6	5.3
Rural AB LPNs	(n=127)	4.4	28.3	7.1	23.9	32.7	3.5
Rural Canada LPNs	(n=1,370)	3.7	17.8	20.4	30.3	25.4	2.4
Rural AB RPNs	(n=45)	4.8	2.4	28.6	47.6	14.3	2.4
Rural Canada RPNs	(n=207)	2.5	11.2	19.3	34.0	26.4	6.6

Education

The level of nursing education among rural AB nurses was close to the education level of rural nurses in Canada overall. The highest obtained nursing education credential of rural AB nurses was a master's degree (4.1%), while the most commonly obtained highest nursing education credential was a diploma in nursing (70%), followed by a bachelor's degree in nursing (26%). For rural nurses in Canada overall, a diploma in nursing (68%) was the most commonly earned highest nursing education credential, followed by a bachelor's degree in nursing (28%).

In 2015, Alberta RNs overall held more baccalaureate degrees than their counterparts across the country. Alberta RNs' highest credentials were: 40% diploma, 61% bachelor's, and 3.5% master's/doctorate (CIHI 2016a). In the *RRNII* survey, rural AB RNs tended to have a similar level of education compared to rural Canada RNs overall (49% vs. 48% bachelor's, respectively). **Figure 3** shows the highest nursing education credential of rural AB RNs and rural RNs in Canada overall. Among the other regulated nurses in AB, 98% of both rural LPNs and RPNs held a diploma in nursing. Regarding rural RPNs in Canada overall, 88% held a nursing diploma as their highest nursing credential.

Figure 3. Highest Nursing Education Credential - Rural RNs



Where do rural nurses in Alberta work?

The large majority of rural AB nurses were employed in nursing (93%), while the other 7.0% were either on leave (4.4%) or were retired and occasionally working in nursing on either a casual or short-term contract basis (2.6%). **Table 2** shows the population of primary work community of rural AB nurses. Looking at each group of rural AB nurses, 11% of RNs and 5.5% of LPNs reported working in a community with a population fewer than 1,000. In comparison, a greater proportion

of RNs (15%) and LPNs (12%) in rural Canada worked in a community of this size. No rural AB NPs or RPNs reported their primary work community to have a population below 1,000.

Table 2. Population of Primary Work Community, Rural Nurses in AB

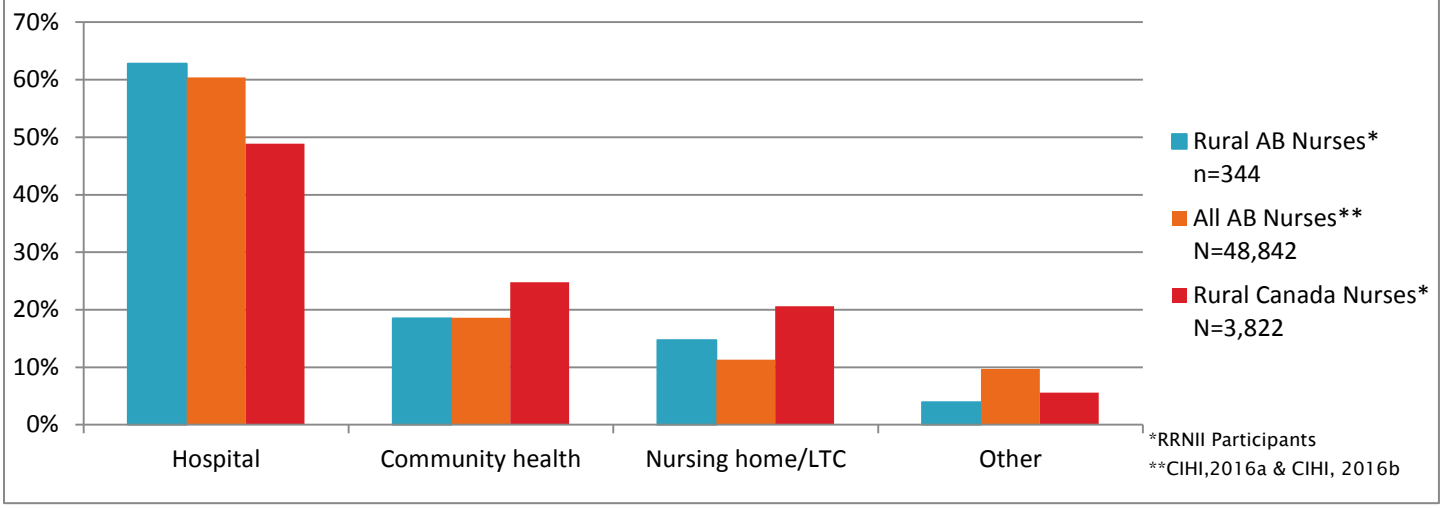
Community Population	% (n=344)
≤ 999	7.4
1,000 - 2,499	9.1
2,500 - 4,999	13.6
5,000 - 9,999	40.1
10,000 - 29,999	23.9
≥ 30,000	5.9

Nursing Employment Status

Rural AB nurses were more likely to be employed in a permanent part-time position (50%) than in a permanent full-time position (36%). In comparison, 54% of rural nurses in Canada overall were employed in a permanent full-time position. Important to note is that only 29% of rural AB RNs held a permanent full-time position. The large majority of rural AB nurses worked as staff nurses (86%), which is a greater proportion than that of rural nurses in Canada overall (80%). Only 5.1% of rural AB nurses worked as educators and 4.2% as managers. Compared to rural nurses in Canada overall, a smaller proportion of rural AB RNs worked as clinical nurse specialists (5.1% vs 1.2%), while a larger proportion worked as educators (5.3% vs 9.0%).

Figure 4 shows the primary place of employment for rural AB nurses compared to all nurses in AB and to rural nurses in Canada overall. As Figure 4 shows, the majority of rural AB nurses worked in a hospital setting (63%) compared to 49% of rural nurses Canada wide. While 87% of rural AB RPNs worked in a hospital setting, only 58% of rural RPNs in Canada overall reported this primary place of employment. Finally, a lower proportion of rural AB LPNs reported working in a nursing home/long-term care facility (25%) compared to rural LPNs in Canada overall (37%).

Figure 4. Nursing Workforce in AB and Canada, Primary Place of Employment



Notes

Hospital *includes hospital, mental health centres, rehabilitation/convalescent centres and integrated facilities.*

Community health *includes community health centres, home care agency, nursing station (outpost or clinic), NP led clinic, multidisciplinary primary healthcare clinic, public health department/unit and physician's office/family practice unit or team.*

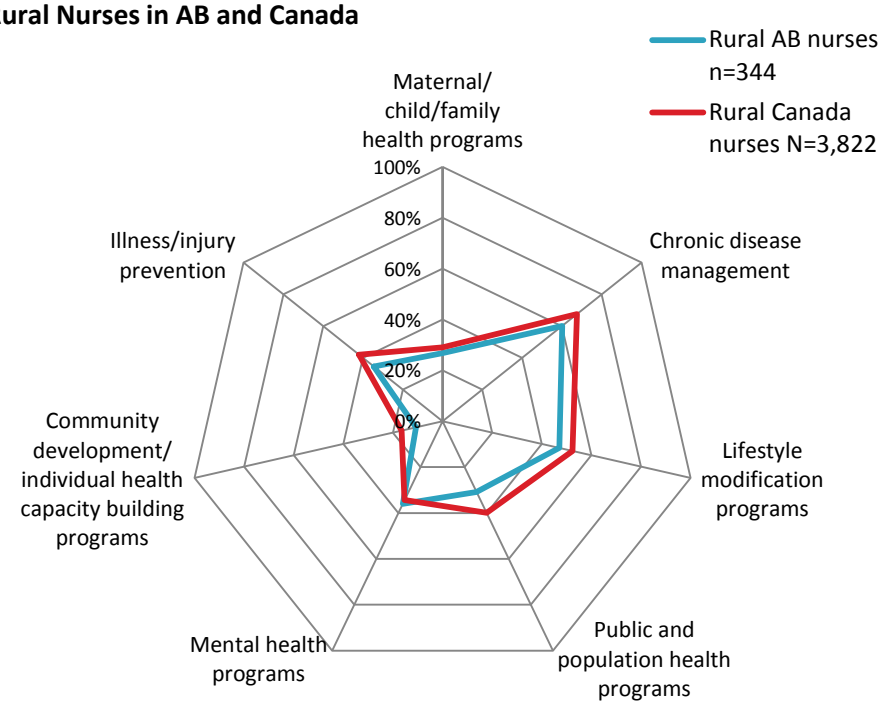
Nursing home/LTC *includes nursing home/long-term care facility.*

Other *place of work includes professional association/government, occupational health, private nursing agency/self-employed, educational institution and other place of work.*

What is the scope of practice of rural nurses in Alberta?

A distinctive characteristic of rural nursing is its broad scope of practice, which is closely related to the rural context of each community and limited access to healthcare resources. In an attempt to shed some light on this phenomenon and find commonalities, nine main categories of practice were presented to respondents, each consisting of several items. Survey respondents were asked to mark all items they were responsible for. Note that the responses relate to what nurses perceive as their responsibilities rather than what may or may not be within their legislated scopes of practice. Detailed tables are included in **Appendix A.**

Figure 5. Promotion, Prevention and Population Health: Rural Nurses in AB and Canada



The large majority of rural AB NPs (100%), RNs (88%), LPNs (81%), and RPNs (89%) reported working within their licensed scope of practice, compared to 83% of rural NPs, 84% of rural RNs, 77% of rural LPNs, and 90% of rural RPNs in Canada overall.

In terms of *Promotion, Prevention and Population Health*, rural AB nurses reported being responsible for chronic disease management (60%) and lifestyle modification programs (47%). **Figure 5** demonstrates the engagement of rural AB nurses in Promotion, Prevention and Population Health activities compared to rural nurses in Canada overall. Rural AB nurses reported lower engagement in all aspects except for mental health programs. **Figure 6** shows differences among the RNs, LPNs, and RPNs in rural AB, illustrating that rural AB LPNs often reported greater engagement in promotion, prevention and population health activities than did RNs.

Regarding *Assessment*, the majority of rural AB nurses noted that they were responsible for providing health and wellness assessments such as focused history and physical assessment (71%), older adult health assessment (69%), complete history and physical assessment (67%), and mental health assessment (51%). **Figure 7** shows the engagement of rural AB LPNs and rural Canada LPNs in assessment activities.

In terms of *Therapeutic Management*, the large majority of rural AB nurses identified that they were responsible for administering medication (84%) and the majority for dispensing medication (58%). Fewer rural AB nurses, however, identified that they were responsible for other areas of therapeutic management compared to their colleagues. For instance, fewer rural AB RNs indicated responsibility for prescribing medication using protocols and guidelines (11%) than did rural RNs in Canada overall (30%).

Figure 6. Promotion, Prevention and Population Health: Rural AB RNs, LPNs and RPNs

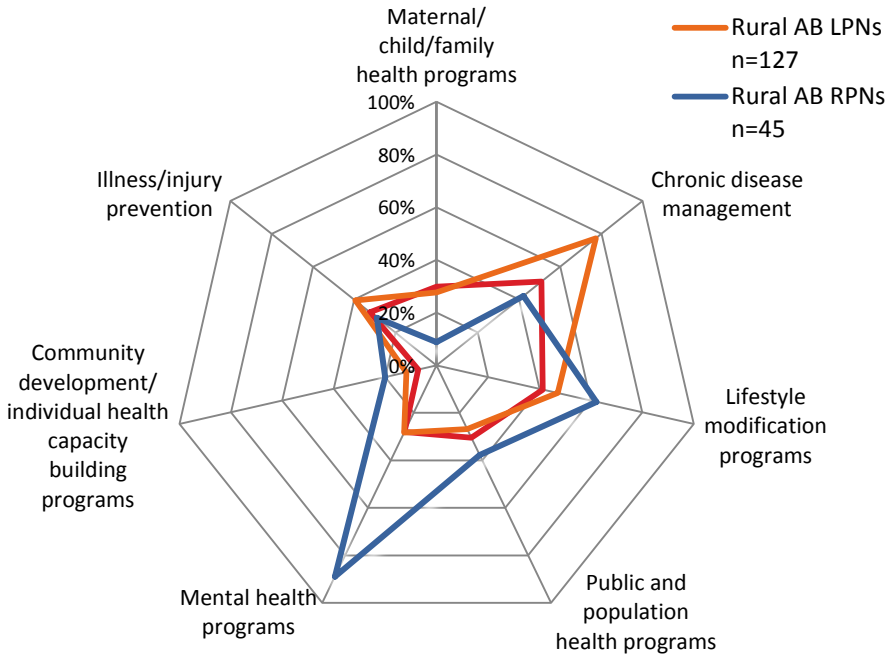
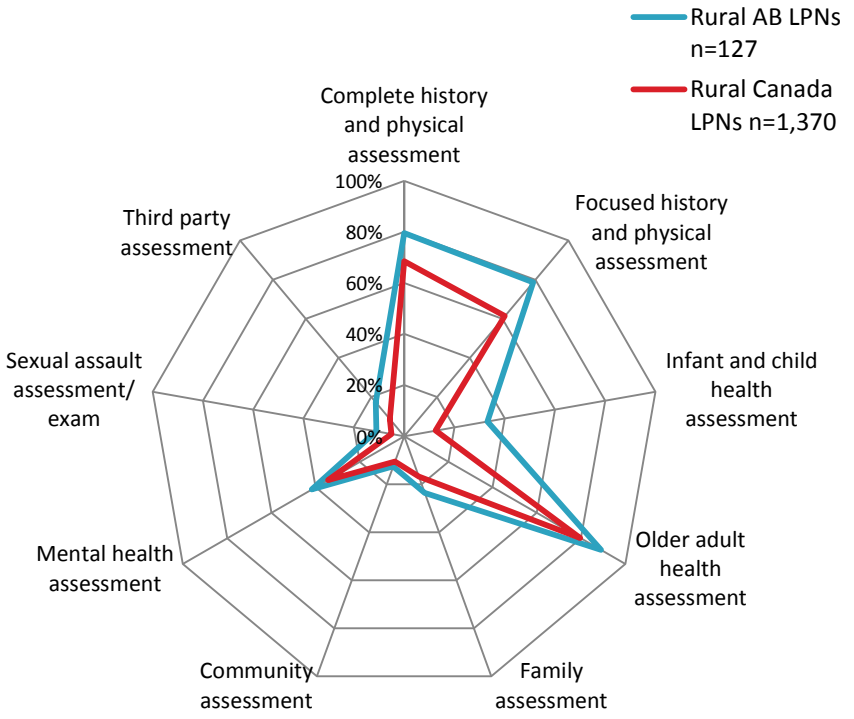


Figure 7. Assessment: Rural LPNs in AB and Canada

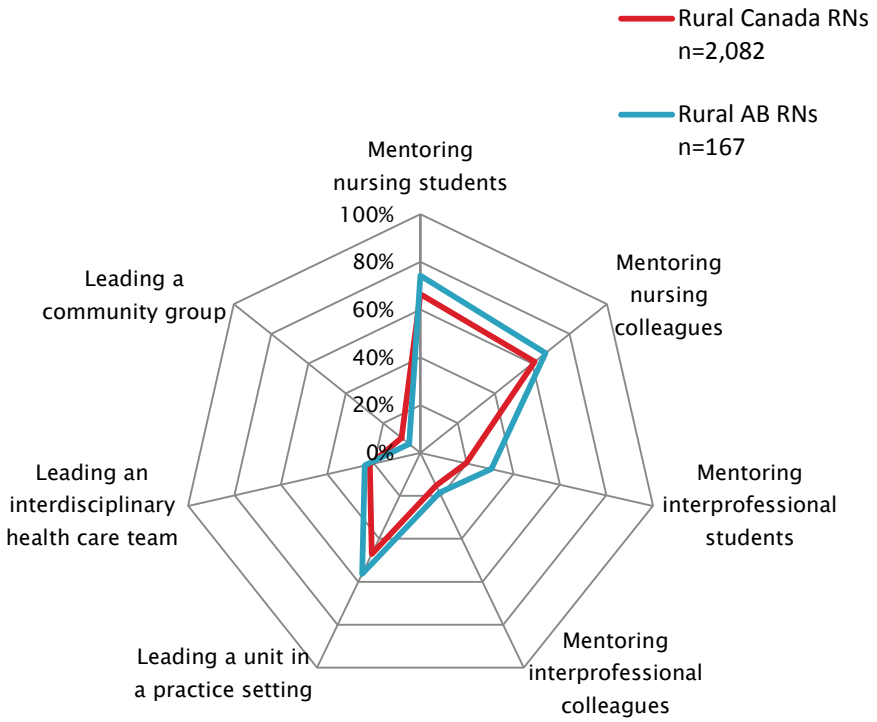


The category of *Diagnostics* contained three subcategories. Regarding *Laboratory Tests*, the majority of rural AB nurses noted they were responsible for taking and processing orders for laboratory tests (64%) and obtaining samples for laboratory tests (54%). Nearly 41% of rural AB LPNs indicated they were responsible for ordering laboratory tests and 34% for interpreting the results, compared to rural Canada LPNs overall (29% and 25%). Regarding *Diagnostic Tests,* although rural AB nurses indicated responsibility for taking and processing orders for advanced diagnostic tests (52%), nurses rarely indicated responsibility for other aspects of advanced diagnostic tests. In terms of *Diagnostic Imaging*, the majority of rural AB nurses considered taking and processing orders for diagnostic imaging (61%) to be their responsibility, which is a larger proportion than for rural nurses in Canada overall (50%).

In the category of *Diagnosis and Referral*, rural AB nurses reported responsibility for both following protocols and using decision support tools to arrive at a plan of care (78%) and independently making a nursing diagnosis based on assessment data (63%). The minority of nurses identified pronouncing death (23%) to be part of their responsibility, which is considerably lower than for rural nurses in Canada overall (35%).

Regarding *Emergency Care and Transportation,* just above half (52%) of rural AB nurses indicated they were responsible for organizing urgent or emergent medical transportation, however, many nurses (42%) did not report providing any aspect of emergency care and transportation.

Figure 8. Leadership: Rural RNs in AB and Canada



The organization and provision of emergency care and transportation were common responsibilities of rural AB LPNs (52%), compared to rural LPNs in Canada overall (36%). Just under third (27%) of rural AB RPNs reported responding to emergency calls or leading as first responders compared to 15% of RPNs in rural Canada overall.

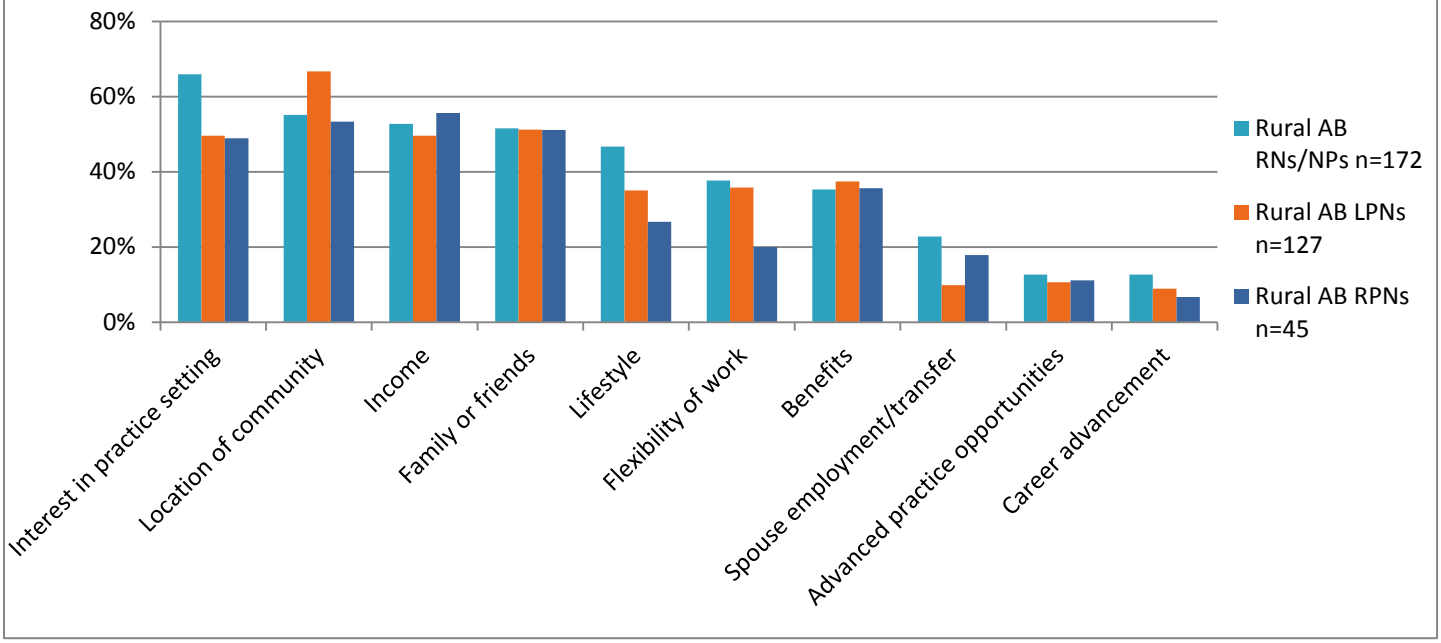
When it comes to *Leadership*, the majority of rural AB nurses reported being involved in both supervising and mentoring nursing students (74%) and nursing colleagues (56%). The minority (47%) of rural AB nurses reported leading a unit/shift in a practice setting, but fewer noted that they led an interdisciplinary team (22%). **Figure 8** illustrates the engagement of rural AB RNs and rural Canada RNs in leadership practices.

What are the career plans of rural nurses in Alberta?

Recruiting and retaining nurses in rural nursing positions is an ongoing challenge (Kulig, Kilpatrick, Moffitt, & Zimmer, 2015). For all rural AB nurses, the most influential reasons they came to work in their primary work community were location of the community (59%), interest in the practice setting (54%), family or friends (40%), and income (39%).

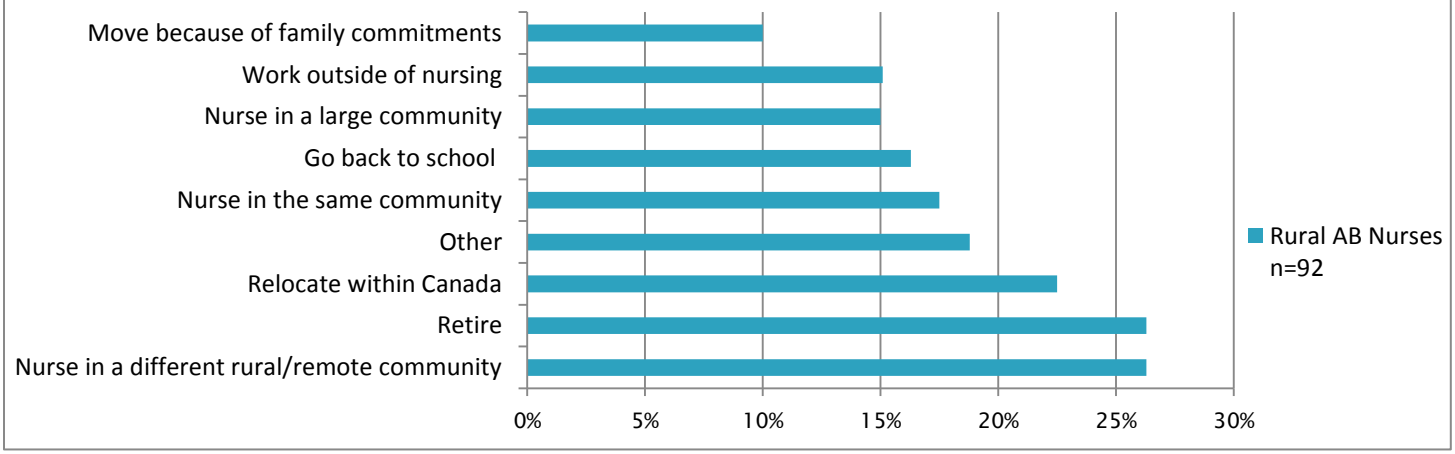
Rural AB nurses were asked the reasons why they continue working in their primary work community. The strongest retention factors were location of the community (59%), interest in the practice setting (58%), income (52%), and family or friends (51%). See **Figure 9** for a detailed breakdown of retention factors by type of nurse. The large majority of rural AB nurses agreed that they were satisfied with their primary work community (82%); the remaining 18% were either neutral or were dissatisfied.

Figure 9. Reasons why Rural AB Nurses Continue Working in their Community



In the *RRNII* survey results, 28% of rural AB nurses indicated that they were planning to leave their present position within the next 12 months, which is a slightly higher proportion than what was found for rural nurses in Canada overall (26%). This included 31% of RNs, 28% of LPNs, and 13% of RPNs. Rural AB nurses who intended to leave (n=92) reported a variety of career plans, which are illustrated in **Figure 10**. Most often, they intended to retire (26%) or nurse in a different rural or remote community (26%).

Figure 10. Future Plans of Rural AB Nurses who Intended to Leave Within Next 12 Months

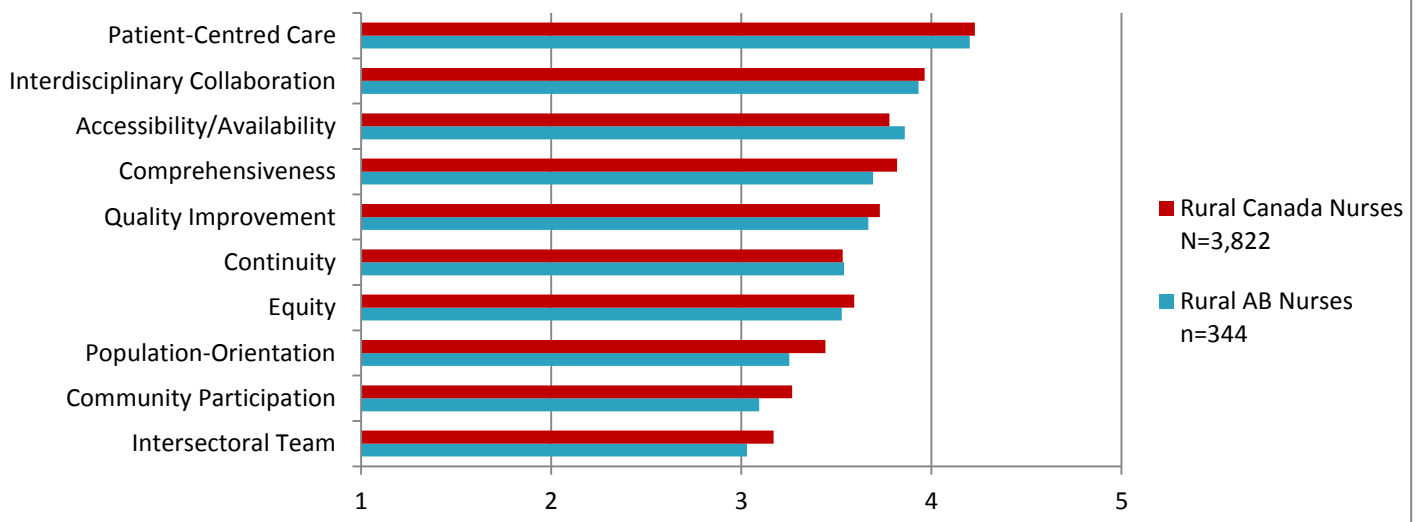


Some of the rural AB nurses who stated they intended to leave said they would consider continuing to work in a rural/remote community if certain conditions were met, such as if they were to have increased flexibility in scheduling (51%), receive an annual cash incentive (45%), utilize more of their skills (37%), and have opportunities to update skills and knowledge (35%).

What do rural Alberta nurses say about primary health care in their workplace?

In the *RRNI* survey findings, it was clear that rural nurses in all settings were engaged in primary health care. In the *RRNII* survey, nurses were asked about aspects of primary health care at their workplace through the Primary Health Care Engagement Scale (Kosteniuk et al, 2016). Items were grouped in 10 categories: patient-centred care, interdisciplinary collaboration, comprehensiveness of care, quality improvement, accessibility/availability, continuity of care, equity, population-orientation, community participation, and intersectoral team. Each item was rated on a 5 point Likert Scale (1=strongly disagree to 5=strongly agree). Mean scores are reported in **Figure 11**.

Figure 11. Rural Nurses' Perspectives on Primary Health Care in their Workplace



It is evident that rural AB nurses were engaged in primary health care, often to a slightly lesser extent than rural nurses in Canada overall, which is illustrated by slightly lower means in eight categories as compared to rural nurses in Canada overall. However, there was a noticeably higher mean for rural AB nurses in terms of *Accessibility/Availability* compared to rural nurses in Canada overall.

In general, rural AB nurses rated *Patient-Centred Care* strongly positively and reported that their patients are treated with respect and dignity, that providers are concerned with maintaining patient confidentiality, and that their workplace is a safe place for patients to receive healthcare services. Moreover, rural AB nurses were positive that providers are supported in thinking of patients as partners.

Rural AB nurses rated *Interdisciplinary Collaboration* positively, wherein they understood who should take the lead with a patient when there is overlap in responsibilities. Nurses were strongly positive that a collaborative atmosphere exists between healthcare providers from different disciplines within their workplace and that they are consulted by providers from other disciplines regarding patient care.

Overall, *Accessibility/Availability* to healthcare services was rated positively by rural AB nurses. Included are nurses' perceptions that services are organized to be as accessible as possible and that patients have easy access to healthcare providers in person or by telephone after hours when their workplace is closed (if they need urgent care). Rural AB

nurses were strongly positive that patients needing urgent care can see a healthcare provider the same day when their workplace is open.

Regarding *Comprehensiveness*, rural AB nurses responded positively that patients are referred to necessary services when they require a service their workplace does not provide, that their workplace offers harm reduction or illness prevention initiatives, and that chronic conditions are addressed.

Similarly, *Quality Improvement* was rated positively by rural AB nurses, who identified that patient charts are kept current, that their workplace uses patient health indicators to measure quality improvement, and that quality is regularly measured at their workplace. Nurses were strongly positive that there is a process in their workplace for responding to critical incidents.

Although rural AB nurses rated *Continuity of Care* positively, an interesting pattern of results should be noted. Nurses were strongly positive that they have a good understanding of their patients' health history and that they have easy access to information about their patients' past health care provided in their workplace. However, nurses voiced some concerns over continuity of care across settings. While nurses were positive that they have easy access to information about their patients' past health care provided outside their workplace, care coordination for patients outside their workplace was rated negatively, indicating some difficulty.

Equity of health care was perceived positively by rural AB nurses, who agreed that healthcare providers understand the impact of social determinants of health, that their workplace is organized to address the needs of vulnerable or special needs populations, and that all patients have access to the same healthcare services, regardless of geographic location, individual or social characteristics. Nurses were neutral on whether or not patients could afford to receive the healthcare services they need, such as filling prescriptions or dental work.

In terms of *Population Orientation*, rural AB nurses were positive about their workplace keeping current registries of patients who have chronic conditions, that their workplace monitors patient outcome indicators, that their workplace has taken part in a needs assessment of the community, that their workplace quickly responds to health needs of the community, and that there is a good fit between services in their workplace and the community's healthcare needs.

Rural AB nurses identified some concerns about *Community Participation*, despite an overall positive rating. Nurses felt positively that their workplace supports healthcare providers in thinking of the community as a partner, that their workplace seeks input from the community about the healthcare services it needs, and that their workplace has implemented changes which emerged from community consultations. However, nurses felt that community members are not treated as partners when making decisions on healthcare service delivery changes, indicated by a negative rating.

Even though rural AB nurses reported positively on *Intersectoral Teams* overall, some concerns were raised. Nurses felt positively that their workplace works closely with community agencies and that there have been improvements in the way community services are delivered based on community agencies working together. However, nurses reported that they personally do not work closely with community agencies and that such agencies do not meet regularly to discuss common issues that affect health; both dimensions received negative ratings.

Please note that the Primary Health Care Engagement Scale continues to be refined. Further details are available from the authors.

Limitations

The number of rural AB nurses was sufficient for analysis at the provincial level, but lower than the number expected. For this reason, we can say the following: with 95% confidence, the sample of rural RNs, NPs, LPNs, and RPNs in AB is representative of rural AB nurses as a whole; and say with below 85% confidence, the separate samples of rural RNs, NPs, LPNs, and RPNs are representative. As we sampled only 30% (approximately) of the rural nurses in the province, we compared the age and gender characteristics of the study's sample with all rural nurses in the province to see how similar or different they were. The two samples were comparable, although our sample did underrepresent nurses aged 25-34, 35-44, and overrepresented female nurses and nurses aged 55-64 (CIHI, 2017). As such, findings should be interpreted with caution. As well, in this fact sheet, not all statistical measures are reported.

Summary

In 2015, 12% of the regulated nursing workforce in Alberta was located in rural areas in which 19% of the population lived (CIHI 2016a). This is a decrease from 2006, when 17% of the nurses in Alberta worked in rural and remote areas where 18% of the population lived, and from 2010 when 14% of the nurses in Alberta cared for 19% of the population (Place, MacLeod, & Pitblado, 2014). Although the nursing workforce in Alberta overall has increased, along with growth in the population mainly in urban and suburban areas, the decreasing proportion of nurses in rural Alberta is of concern.

Generally, a greater proportion of rural AB nurses worked in a hospital setting than their counterparts across Canada. The distribution of health services across rural AB may contribute to the finding that rural AB nurses are less likely than rural nurses across Canada to live in communities of less than 1,000 persons.

The vast majority of rural AB nurses reported their role to be within their licensed scope of practice. When asked why they continued to work in the community, the reasons differed by type of nurse. Interest in the practice setting was more important for rural AB RNs and NPs, while location of the community was more important for LPNs, and income was most important for RPNs.

Close to 1/3 of rural AB RNs said they planned to leave their present position within the next 12 months, with over a quarter of those planning to retire and more than another quarter indicating they would leave to nurse in a different rural community. Increased flexibility of scheduling was the top-most factor that would keep the nurses in the community.

Rural Alberta nurses expressed positive views about primary health care, their contributions to it, and the accessibility it provides for patients. Concerns were indicated however, related to patients' financial abilities to afford necessary health care, as well as the extent to which their rural workplaces assess and respond to the needs of their communities, and the way in which they personally work with community agencies.

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Appendix A: Scope of Practice: Rural AB and Canada RNs, LPNs, and RPNs

	Rural RNs		Rural LPNs		Rural RPNs	
Promotion, Prevention, and Population Health	**AB % (n=167)**	**Canada % (n=2,082)**	**AB % (n=127)**	**Canada % (n=1,370)**	**AB % (n=45)**	**Canada % (n=207)**
Chronic disease management	50.9	62.7	77.2	74.9	42.2	49.8
Maternal/child/family health programs	29.9	35.2	27.6	18.0	8.9	6.8
Lifestyle modification programs	41.3	50.7	47.2	50.1	62.2	58.9
Public and population health programs	30.5	43.4	26.8	32.3	37.8	32.4
Mental health programs	28.1	30.4	28.3	32.4	88.9	79.7
Community development/individual health capacity building programs	7.2	17.7	11.8	12.6	20.0	19.3
Illness/injury prevention	32.3	38.4	39.4	47.4	28.9	38.2
None of the above	28.1	21.8	16.5	17.3	6.7	7.2

Assessment	**AB %**	**Canada %**	**AB %**	**Canada%**	**AB %**	**Canada %**
Complete history and physical assessment	65.3	59.6	79.5	68.5	35.6	39.1
Focused history and physical assessment	68.9	70.3	78.7	61.4	55.6	52.7
Infant and child health assessment	34.1	32.3	33.1	12.5	2.2	0.5
Older adult health assessment	60.5	61.2	89.0	79.7	42.2	50.2
Family assessment	28.1	25.0	23.6	16.9	13.3	21.7
Community assessment	15.0	16.2	12.6	10.6	13.3	15.9
Mental health assessment	46.7	40.7	41.7	34.3	86.7	82.6
Sexual assault assessment/exam	15.6	19.4	11.0	5.0	4.4	5.3
Third party assessment	15.6	18.7	17.3	8.6	2.2	6.3
Other assessment	2.4	2.5	0.0	0.9	0.0	1.9
None of the above	9.0	10.7	5.5	10.8	6.7	5.3

Therapeutic Management	**AB %**	**Canada %**	**AB %**	**Canada%**	**AB %**	**Canada %**
Administering oral/SC/IM/topical/inhaled medications	78.4	80.0	93.7	89.5	77.8	72.9
Dispensing medication	51.5	54.2	69.3	63.8	57.8	50.2
Pharmacy management	15.0	25.3	15.0	15.8	17.8	14.0
Prescribing medication independently	1.2	7.8	1.6	3.3	4.4	1.9
Prescribing medication using protocols or guidelines	13.2	29.5	11.0	11.5	2.2	7.2
Other medication related responsibilities	10.8	8.3	6.3	5.8	2.2	13.5
None of the above	16.8	14.8	3.9	8.6	15.6	19.8

Laboratory Tests	**AB %**	**Canada %**	**AB %**	**Canada%**	**AB %**	**Canada %**
Taking and processing orders for laboratory tests	64.7	64.5	67.7	61.2	57.8	49.8
Ordering laboratory tests	39.5	37.4	40.9	28.5	33.3	23.7
Obtaining samples for laboratory tests	51.5	57.3	66.1	57.0	28.9	34.3
Performing and analyzing on-site laboratory tests	22.8	29.8	23.6	19.7	8.9	10.6
Interpreting laboratory and diagnostic tests	45.5	46.2	33.9	24.5	22.2	25.6
None of the above	16.8	19.6	11.0	18.4	26.7	35.7

Diagnostic Tests	Rural RNs		Rural LPNs		Rural RPNs	
	AB % (n=167)	Canada % (n=2,082)	AB % (n=127)	Canada% (n=1,370)	AB % (n=45)	Canada % (n=207)
Taking and processing orders for advanced diagnostic tests	51.5	46.4	54.3	41.1	48.9	33.8
Ordering advanced diagnostic tests	12.6	8.1	15.7	7.6	17.8	5.3
Performing advanced diagnostic tests	0.6	1.6	1.6	1.3	2.2	1.0
Interpreting and following up advanced diagnostic tests	14.4	13.3	10.2	6.1	6.7	7.7
None of the above	42.5	49.2	44.1	55.8	44.4	63.3

Diagnostic Imaging	AB %	Canada %	AB %	Canada%	AB %	Canada %
Taking and processing orders for diagnostic imaging	61.7	53.7	63.0	48.3	57.8	43.5
Ordering routine diagnostic imaging	32.3	25.7	29.9	16.9	28.9	13.5
Ordering advanced diagnostic imaging	11.4	5.9	12.6	7.4	22.2	9.7
Performing diagnostic imaging	1.2	8.8	0.8	0.9	0.0	0.0
Interpreting and following up diagnostic imaging	10.2	14.3	3.1	3.3	4.4	4.3
None of the above	31.7	39.0	32.3	46.4	35.6	52.2

Diagnosis and Referral	AB %	Canada %	AB %	Canada%	AB %	Canada %
Follow protocols / use decision support tools to arrive at a plan of care	75.4	76.3	81.1	74.3	80.0	74.4
Independently make a nursing diagnosis based on assessment data	68.9	65.9	51.2	36.4	68.9	67.1
Independently make a medical diagnosis based on assessment data	4.2	11.0	1.6	2.8	8.9	5.8
Independently make referrals to other healthcare practitioners	43.1	47.7	27.6	28.5	28.9	47.3
Independently make referrals to medical specialists	3.0	11.0	2.4	4.7	6.7	8.7
Certify mental health patients for committal	1.2	6.8	0.8	0.9	4.4	10.6
Pronounce death	33.5	42.7	15.0	22.9	8.9	28.0
None of the above	8.4	12.6	9.4	20.2	6.7	7.7

Emergency Care and Transportation	AB %	Canada %	AB %	Canada%	AB %	Canada %
Organize urgent or emergent medical transport	55.1	52.0	52.0	35.5	44.2	35.3
Provide care during urgent/emergent medical transportation	25.7	35.4	18.1	19.6	24.4	12.6
Respond/lead emergency calls as a first responder	14.4	17.8	13.4	10.9	26.7	15.0
Respond/lead emergency search and rescue calls in rural, remote or wilderness settings	2.4	5.4	1.6	1.8	6.7	3.4
None of the above	38.9	41.3	41.7	52.8	53.3	60.9

Leadership	AB %	Canada %	AB %	Canada%	AB %	Canada %
Supervising/mentoring nursing students	74.3	66.6	70.9	56.6	82.2	71.0
Supervising/mentoring nursing colleagues	67.1	61.2	44.1	31.9	55.6	55.6
Supervising/mentoring interprofessional students	30.5	19.6	7.1	8.5	28.9	24.6
Supervising/mentoring interprofessional colleagues	18.6	15.2	7.9	6.3	22.2	24.6
Leading a unit/shift in a practice setting	56.3	47.2	29.1	30.7	64.4	50.2
Leading an interdisciplinary health care team	24.0	21.8	13.4	11.6	42.2	33.8
Leading a community group	6.0	10.1	1.6	2.0	4.4	12.1
None of the above	7.8	12.7	17.3	27.4	6.7	9.2