Nursing Practice in Rural and Remote Canada II

Manitoba Survey Fact Sheet

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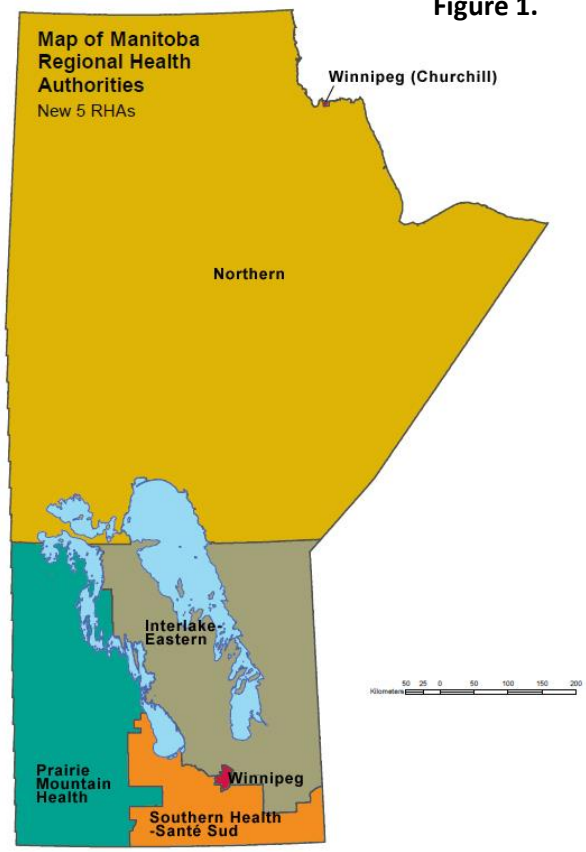
The multi-method study, *Nursing Practice in Rural and Remote Canada II* (*RRNII*), aims to provide insights into the work lives and practice experiences of registered nurses (RNs), nurse practitioners (NPs), licensed/registered practical nurses (LPNs), and registered psychiatric nurses (RPNs) in rural 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 Manitoba (hereafter rural MB), 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.

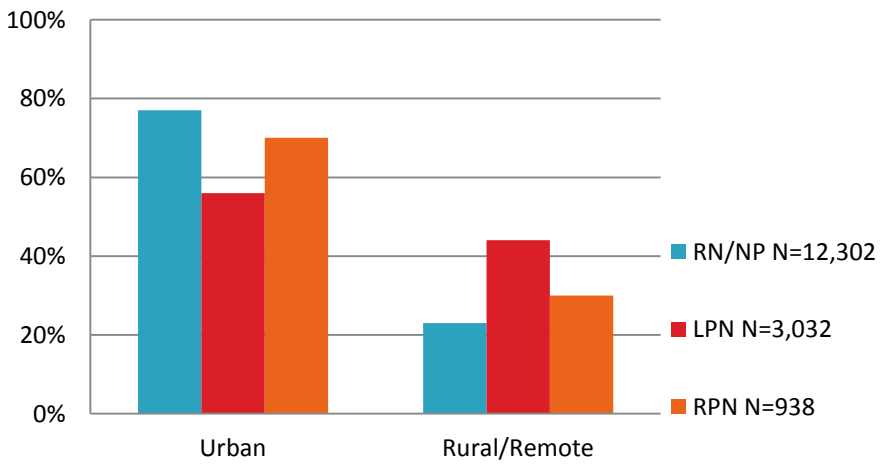
We received a total of 3,822 completed questionnaires by mail or on-line (2,082 RNs, 163 NPs, 1,370 LPNs, and 207 RPNs) from across Canada. The national response rate was 40% (margin of error 1.5%). **From Manitoba, a total of 458 nurses responded: 189 RNs, 8 NPs, 164 LPNs, and 97 RPNs.** The eligible sample for MB was 973 individuals and the response rate was 47% (n=458, margin of error 4.2%). We can say the following: with 95% confidence, the sample of rural RNs,

NPs, LPNs, and RPNs in MB is representative of rural MB nurses as a whole; say with 85% confidence, the sample of rural RNs in MB is representative of rural MB RNs as a whole; and say with less than 85% confidence, the separate samples of rural NPs, LPNs, and RPNs are representative. In this fact sheet, we compare three sets of data: rural MB nurse data from the *RRNII* survey, rural Canada nurse data from the *RRNII* survey, and data for all MB 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 MB nursing workforce.

Who are the rural nurses in Manitoba?

In 2015, the rural population of MB accounted for 31% of the total provincial population, and 27% of the province's 16,283 regulated nurses (RNs, NPs, LPNs, and RPNs) worked in rural settings (CIHI, 2016a). The geographic distribution of nurses in MB is illustrated in **Figure 2.**

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



(CIHI, 2016b; CIHI, 2016c & CIHI, 2016d)

The large majority of rural MB nurse respondents (75%) in the *RRNII* survey reported growing up in a community with a population of less than 10,000. Important to note is that 27% of rural MB nurses reported growing up in the country outside of any city or town, compared to 17% of rural nurses in Canada overall. Of those currently working in a rural community, 54% reported living in their primary work community. Rural MB nurses who lived outside of their primary work community traveled to work on a daily (58%) or weekly (30%) basis with travel time typically equal to, or under, 7 hours per week (82%). The large majority of rural MB nurses were married or living with a partner (83%); the minority with dependent children (47%).

Age and Gender

In the *RRNII* survey results, 34% of rural MB nurses were 55 years of age or older, compared to 32% of rural nurses in Canada overall; whereas only 17% of rural MB nurses were under 35 years of age, compared to 19% of rural nurses in Canada overall. The proportion of rural MB LPNs (33%) and RPNs (41%) over 55 years of age was slightly higher than the proportion of rural Canada LPNs (28%) and RPNs (33%) in this age group. It should also be noted that the proportion of rural MB RNs (15%) under 35 years of age is below that of rural RNs in Canada overall (19%), and the proportion of rural MB RPNs (19%) in this category was greater than for rural RPNs in Canada overall (14%). See **Table 1** for the age distribution of rural RNs, LPNs, and RPNs in MB and Canada.

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

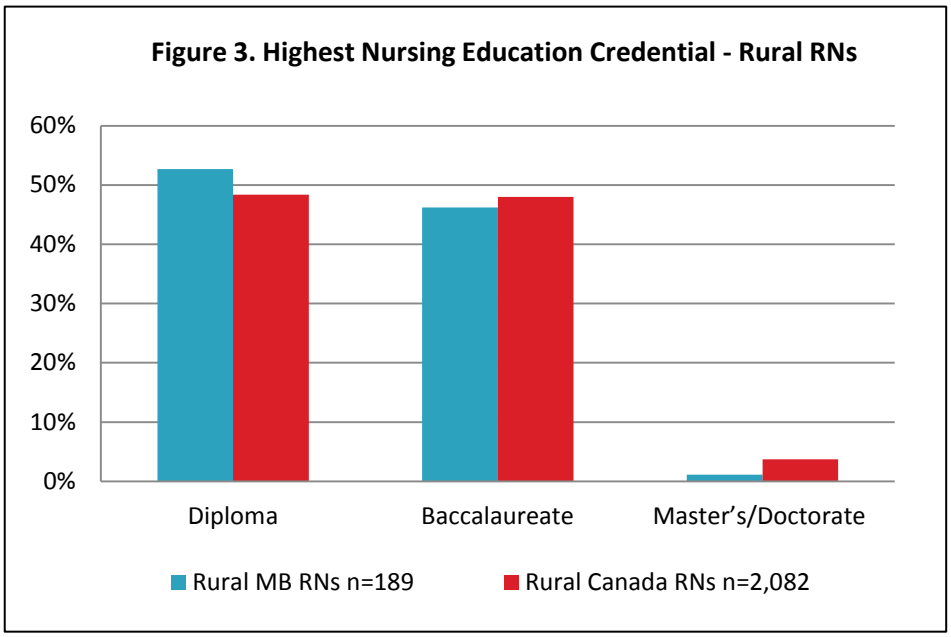
		<25 %	25-34 %	35-44 %	45-54 %	55-64 %	≥65 %
Rural MB RNs	(n=189)	1.1	14.3	19.2	33.0	28.0	4.4
Rural Canada RNs	(n=2,082)	1.1	17.8	19.1	27.2	29.6	5.3
Rural MB LPNs	(n=164)	2.6	15.7	20.3	28.1	29.4	3.9
Rural Canada LPNs	(n=1,370)	3.7	17.8	20.4	30.3	25.4	2.4
Rural MB RPNs	(n=97)	1.1	17.6	14.3	26.4	34.1	6.6
Rural Canada RPNs	(n=207)	2.5	11.2	19.3	34.0	26.4	6.6

In the *RRNII* survey, the proportion of all male nurses (RNs, NPs, LPNs, and RPNs combined) working in rural MB (9.0%) was greater than the proportion of rural male nurses in Canada overall (6.4%). Furthermore, 8.1% of rural RNs in MB were male, compared to 6.2% of male rural RNs in Canada overall; and 6.9% of rural LPNs in MB were male, compared to 5.6% of male rural LPNs in Canada overall. The same proportion of rural MB RPNs were male (15%) as was found for rural male RPNs in Canada overall (15%).

Education

In the *RRNII* survey, the level of nursing education among nurses in rural MB was slightly below the education level of rural nurses in Canada overall. The highest obtained nursing education credential of rural MB nurses was a master's degree (2.5%), while the most commonly obtained highest nursing education credential was a diploma in nursing (74%), followed by a bachelor's degree in nursing (23%). 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%). Nearly all rural MB LPNs held a diploma in nursing (99%), while rural MB RNs were likely to either hold a diploma (53%) or a bachelor's in nursing (46%) as their highest nursing credential. Across Canada, 99.6% of rural LPNs held a nursing diploma, with rural RNs likely to hold a diploma (48%) or a bachelor's degree in nursing (48%). Rural MB NPs most often held a master's degree in nursing as their highest credential (88%), and rural MB RPNs predominantly held a diploma in nursing as their highest nursing credential (81%). Across Canada, 58% of rural NPs held a master's degree in nursing and 88% of RPNs held a diploma in nursing as their highest nursing credential. **Figure 3** shows the highest nursing education credential of rural MB RNs and rural RNs in Canada overall in the *RRNII* survey.

Figure 3. Highest Nursing Education Credential - Rural RNs



Where do rural nurses in Manitoba work?

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

Community Population	% (n=458)
≤ 999	17.8
1,000 - 2,499	18.9
2,500 - 4,999	11.9
5,000 - 9,999	21.2
10,000 - 29,999	22.1
≥ 30,000	8.1

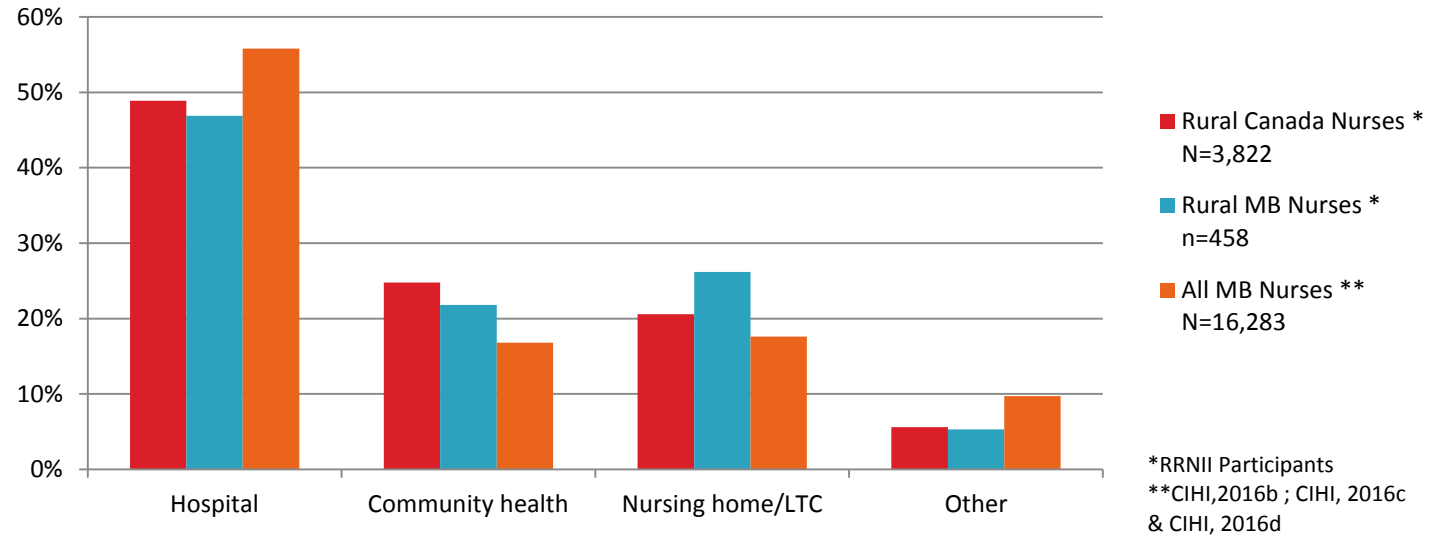
The large majority of rural MB nurses who responded to the survey were employed in nursing (89%), while the remaining 11.4% were either on leave (2.6%) or were retired and occasionally working in nursing on either a casual or short-term contract basis (8.8%). A greater proportion of rural MB nurses were retired and occasionally working in nursing compared to rural nurses in Canada overall (4.8%). **Table 2** shows the population of primary work community of rural MB nurses. A greater proportion of rural MB nurses worked in a primary work community with a population of fewer than 1,000 (18%) compared to 14% of rural nurses in Canada overall. Considering each group of rural MB nurses, 57% of NPs, 51% of RNs, 28% of RPNs, and 58% of LPNs worked in a community with a population fewer than 5,000. These proportions show both similarities and differences compared to rural nurses in Canada overall, wherein 54% of NPs, 42% of RNs, 29% of RPNs, and 40% of LPNs worked in a community of this size. While 27% of rural MB LPNs worked in a community with a population below 1,000, only 12% of LPNs in Canada overall worked in a community of this size.

Nursing Employment Status

Rural MB nurses were likely to be employed in either a permanent part-time (45%) or full-time (41%) position. In comparison, 54% of rural nurses in Canada overall were employed in a permanent full-time position. Moreover, 16% of rural MB nurses worked in a casual position, which is the same proportion that is seen for rural nurses in Canada overall (16%). The large majority of rural MB nurses worked as staff nurses (82%) and the small minority as managers (7.6%). A smaller proportion of rural MB RPNs worked as staff nurses (67%) and a larger proportion as clinical nurse specialists (17%), compared to rural RPNs in Canada overall (77% and 11%).

Figure 4 shows the primary place of employment for rural MB nurses compared to all nurses in MB and to rural nurses in Canada overall. As Figure 4 shows, rural MB nurses most often worked in a hospital setting (47%). A greater proportion of rural MB nurses worked in a nursing home or long-term care facility (26%) as compared to rural nurses in Canada overall (21%) and all MB nurses (18%). While 45% of rural MB LPNs reported working in a nursing home or long-term care facility, only 37% of rural LPNs in Canada overall reported this primary place of employment.

Figure 4. Nursing Workforce in MB 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.*

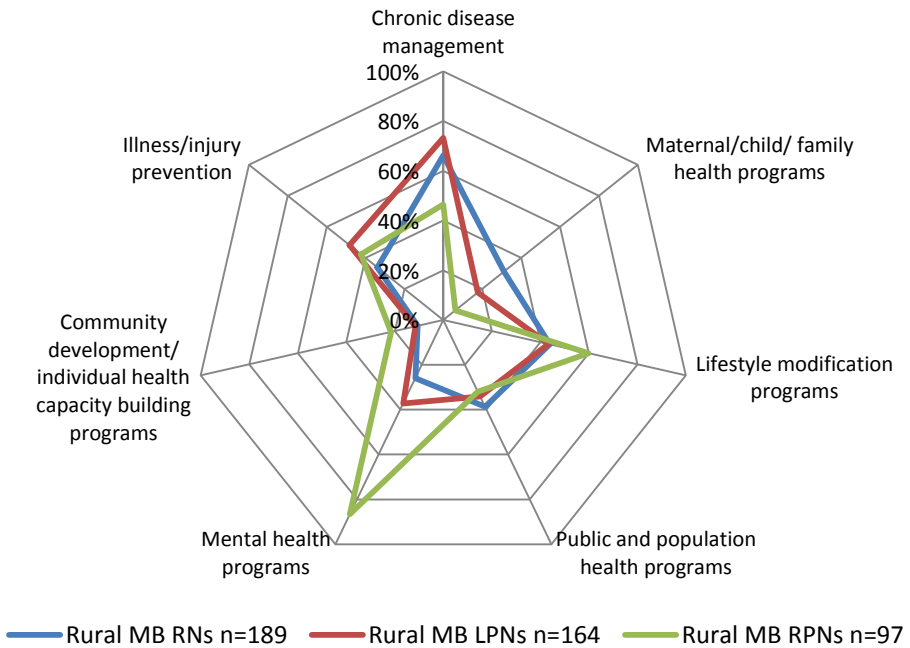
Other *place of work includes professional association/government, occupational health, private nursing agency/self-employed, educational institution and other place of work.*

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

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**.

The large majority of rural MB RNs (87%), NPs (88%), LPNs (79%), and RPNs (94%) reported working within their licensed scope of practice. These numbers compare to 84% of rural RNs, 83% of rural NPs, 77% of rural LPNs, and 90% of rural RPNs in Canada overall.

Figure 5. Promotion, Prevention and Population Health: Rural RNs, LPNs, and RPNs in MB



In terms of *Promotion, Prevention and Population Health*, rural MB nurses reported being responsible for chronic disease management (65%), lifestyle modification programs (47%), mental health programs (43%), and illness/injury prevention (41%). A greater proportion of rural MB nurses indicated that they provide mental health programs as compared to rural nurses in Canada overall (34%). **Figure 5** shows the varying reported responsibility of rural MB RNs, LPNs, and RPNs on various promotion, prevention, and population health activites.

Regarding *Assessment*, rural MB nurses reported providing health and wellness assessments such as older adult health assessment (68%), focused history and physical assessment (68%), complete history and physical assessment (67%), and mental health assessment (51%). A lower proportion of rural nurses in Canada overall provided mental health assessment (42%) compared to rural MB nurses. Rural MB RNs identified similar assessment responsibilities to rural RNs in Canada overall (**Figure 6**).

Figure 6. Assessment: Rural RNs in MB and Canada

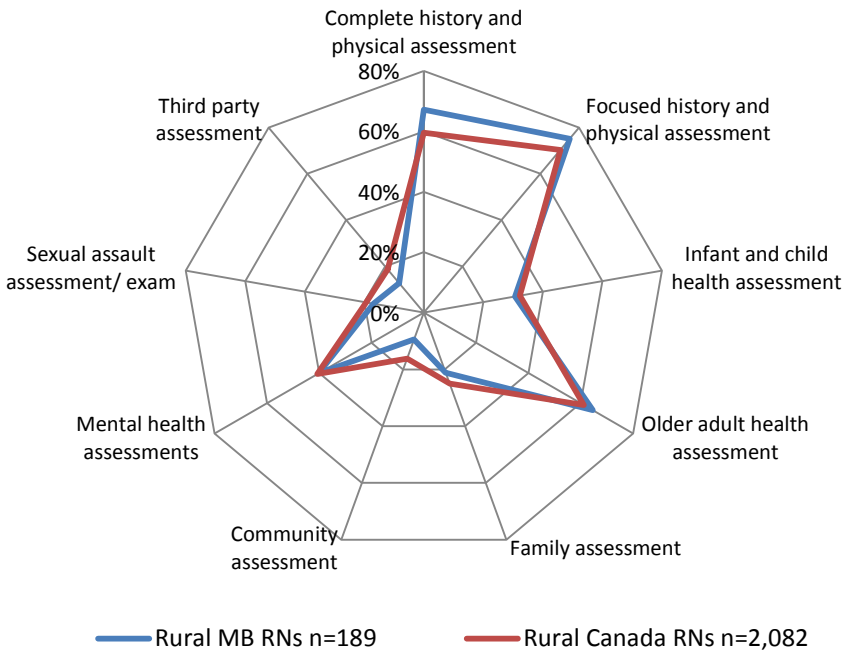
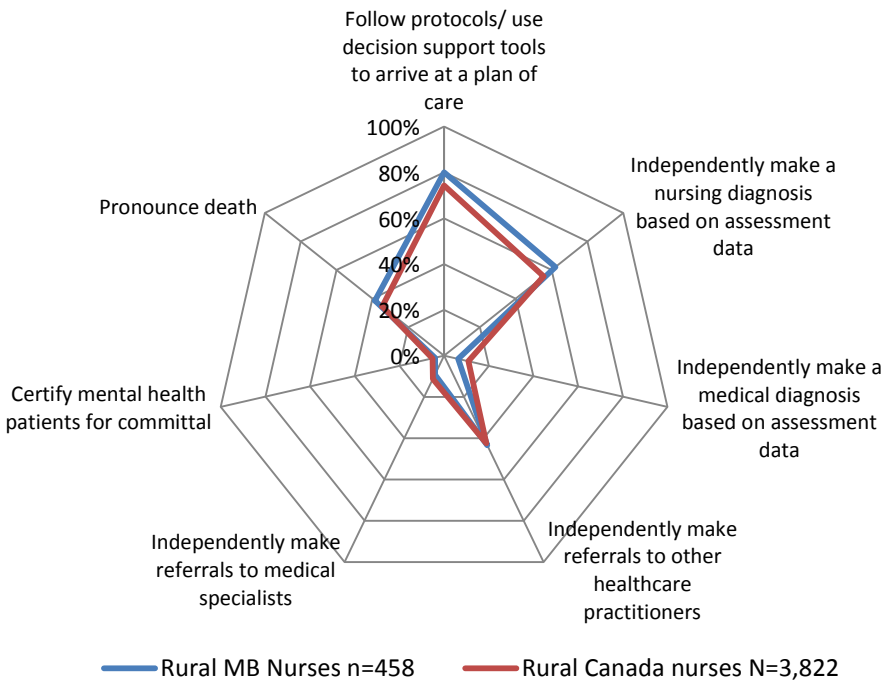


Figure 7. Diagnosis and Referral: Rural nurses in MB and Canada

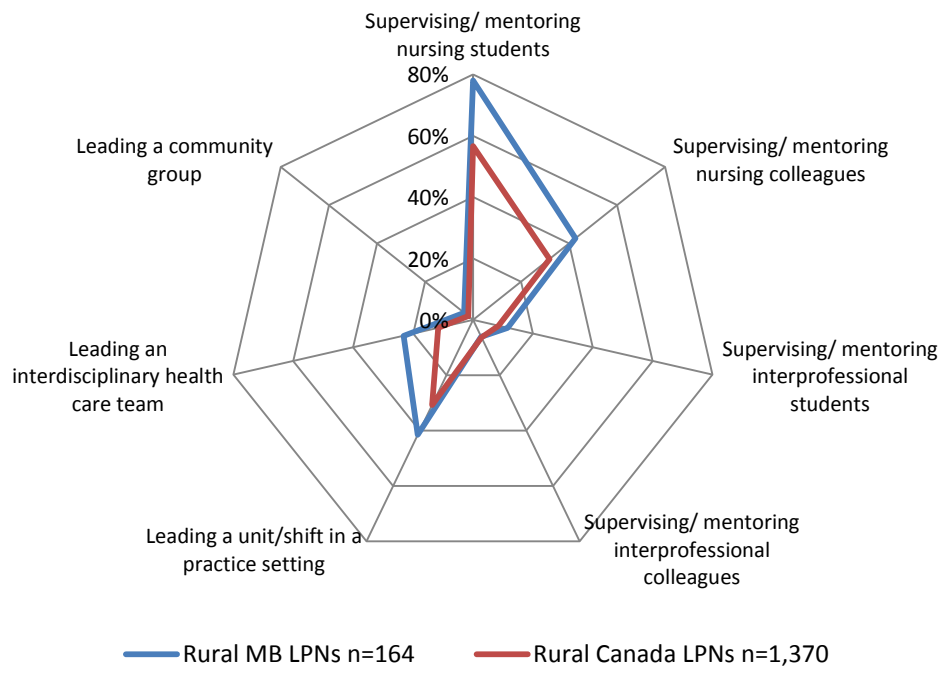


In the category of *Diagnostics*, which included *Laboratory Tests*, *Diagnostic Tests*, and *Diagnostic Imaging*, the majority of rural MB nurses indicated responsibility for taking and processing orders for laboratory tests (65%) and obtaining samples for laboratory tests (50%). The majority of rural MB nurses identified they were responsible for taking and processing orders for advanced diagnostic tests (51%), compared to 43% of rural nurses in Canada overall. Importantly, 45% of rural MB nurses reported they were not responsible for any aspect of diagnostic testing. Finally, in terms of diagnostic imaging, 59% of rural MB nurses reported taking and processing orders for diagnostic imaging. This is a larger proportion than was found for rural nurses in Canada overall (50%).

Within the category of *Therapeautic Management*, the large majority of rural MB nurses indicated responsibility for administering medication (90%), and the majority for dispensing medication (59%). A lower proportion (83%) of rural nurses in Canada overall were responsible for administering medication.

Figure 7 shows the category of *Diagnosis and Referral*. Rural MB nurses identified a similar responsibility to rural nurses in Canada overall. Rural MB nurses reported following protocols or using decision support tools to arrive at a plan of care (80%), independently making a nursing diagnosis based on assessment data (62%), and independently making referrals to other healthcare practitioners (43%).

Figure 8. Leadership: Rural LPNs in MB and Canada



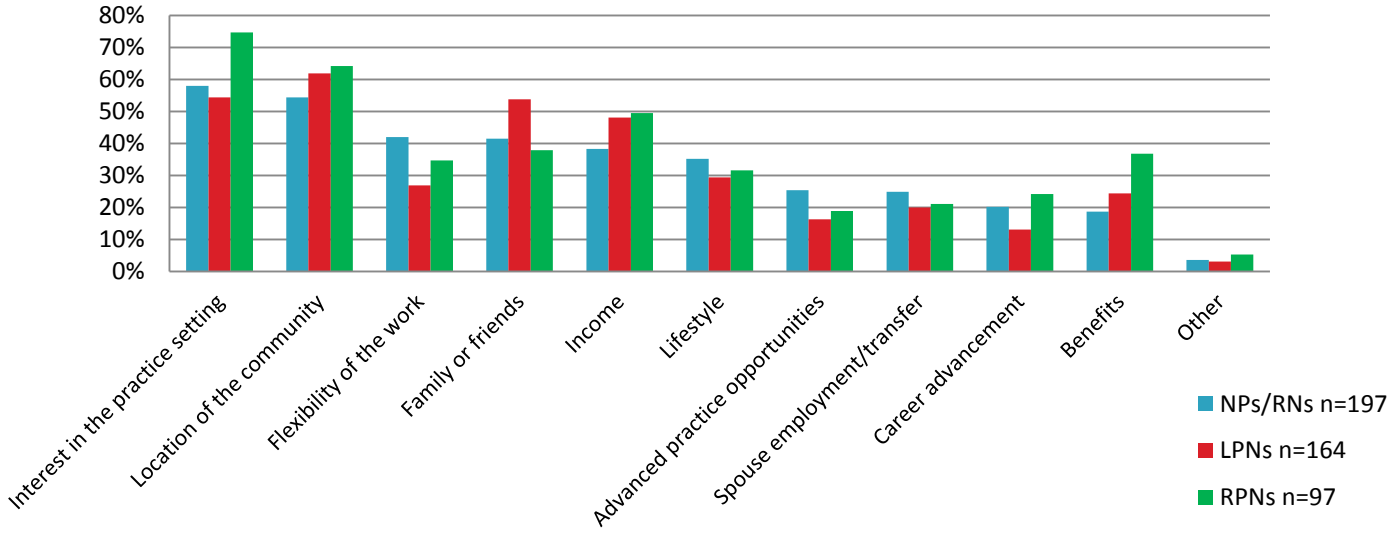
In the category of *Emergency Care and Transportation*, 55% of rural MB nurses reported organizing urgent or emergent medical transportation. This is a greater proportion than that found for rural nurses in Canada overall (45%).

When it comes to *Leadership*, rural MB nurses reported supervising/ mentoring nursing students (75%), supervising/mentoring nursing colleagues (56%), and leading a unit/shift in a practice setting (45%). Only 63% of rural nurses in Canada overall reported supervising/mentoring nursing students, which is a lower proportion compared to rural nurses in MB. **Figure 8** shows reported engagement in leadership activities for rural MB LPNs and rural LPNs in Canada overall.

What are the career plans of rural nurses in Manitoba?

Recruiting and retaining nurses in rural nursing positions is an ongoing challenge (Kulig, Kilpatrick, Moffitt, & Zimmer, 2015). For all rural MB nurses, the most influential reasons they came to work in their primary work community were interest in the practice setting (60%), location of the community (59%), family or friends (45%), and income (44%). See **Figure 9** for a breakdown of recruitment factors by type of nurse.

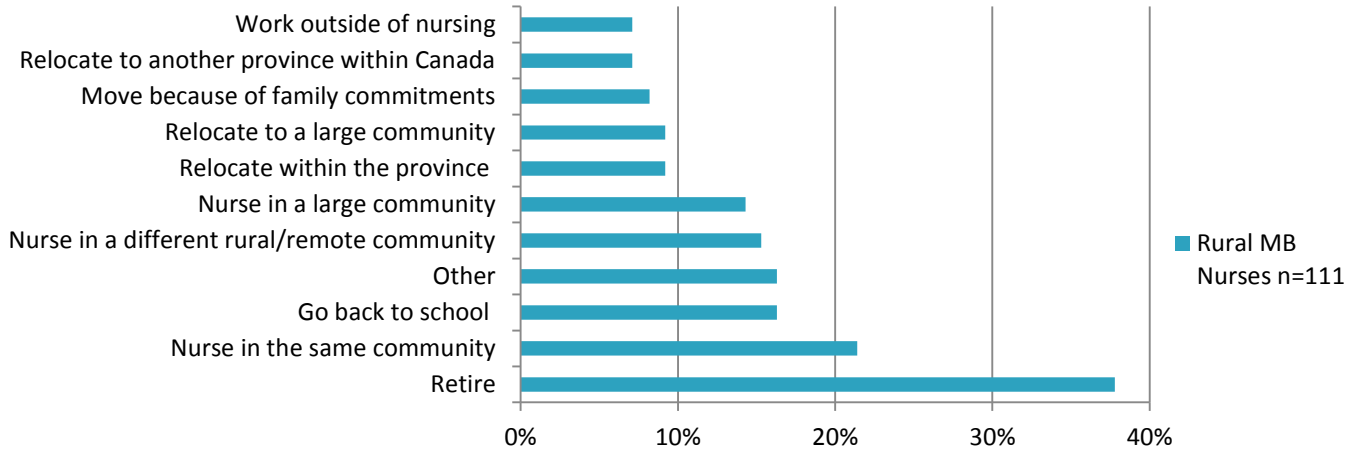
Figure 9. Reasons Why Rural MB Nurses Came to Work in their Community



Rural MB nurses were asked the reasons why they continue working in their primary work community. The strongest retention factors were interest in the practice setting (60%), location of the community (55%), family or friends (55%), income (55%), and flexibility of the work (41%). The large majority of rural MB nurses agreed that they were satisfied with their primary work community (88%); the remaining 12% were either neutral or were dissatisfied.

In the *RRNII* survey results, 25% of rural MB nurses indicated that they were planning to leave their present position within the next 12 months, which is a similar proportion to that found for rural nurses in Canada overall (26%). This included 26% of RNs, 38% of NPs, 22% of LPNs, and 27% of RPNs. Rural MB nurses who intended to leave (n=111) reported a variety of career plans, which are illustrated in **Figure 10**. Most often, they intended to retire (38%), nurse in the same community (21%), or go back to school (16%). A larger proportion of rural MB nurses intended to retire in the next 12 months compared to rural nurses in Canada overall (30%).

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



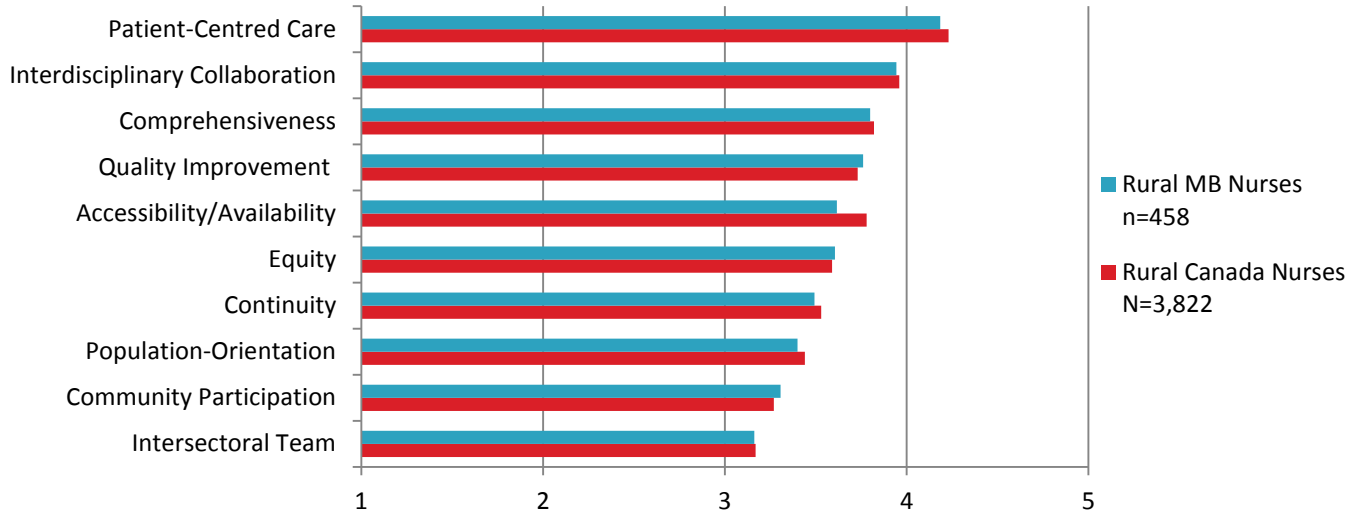
A minority of the rural MB nurses who stated they intended to leave said they would consider continuing to work in a rural/remote community if certain conditions were met, such as if they were to have increased flexibility in scheduling (41%), receive an annual cash incentive (40%), and utilize more of their skills (31%).

What do rural Manitoba 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**.

It is evident that rural MB nurses were engaged in primary health care, often to a similar extent as rural nurses in Canada overall, with the exception of *Accessibility/Availability*.

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



In general, rural MB nurses rated *Patient-Centred Care* strongly positive. Rural MB nurses 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 MB nurses were positive that providers are supported in thinking of patients as partners.

Rural MB nurses rated *Interdisciplinary Collaboration* positively. Included are nurses' perceptions that healthcare providers from other disciplines consult them regarding patient care and that it is understood who should take the lead with a patient when there is overlap in responsibilities. Rural MB nurses were strongly positive that a collaborative atmosphere exists between healthcare providers from different disciplines within their workplace.

In terms of *Comprehensiveness*, rural MB nurses were positive that their workplace offers harm reduction or illness prevention initiatives, that chronic conditions are addressed, and that patients are referred to necessary services when they require a service their workplace does not provide.

Rural MB nurses also felt positively about *Quality Improvement*, having identified their workplace uses patient health indicators to measure quality improvement and that their workplace regularly measures quality. Importantly, rural MB nurses were strongly positive that their workplace keeps patient charts current and that there is a process in their workplace for responding to critical incidents.

Overall, *Accessibility* to healthcare services was regarded positively. Rural MB nurses felt positively that services are organized to be as accessible as possible and that when their workplace is closed, patients can see a healthcare provider in person or can get medical advice by phone. These nurses felt strongly positive that patients needing urgent care can see a healthcare provider the same day when their workplace is open.

Rural MB nurses rated *Equity* positively, reporting that patients can access healthcare services regardless of individual or social characteristics and regardless of geographic location, that healthcare providers understand the impact of social determinants of health, and that their workplace is organized to address the health needs of vulnerable or special needs populations. Rural MB nurses reported to a lesser extent, but still positively, that patients in their workplace can afford to receive the healthcare services they need.

Similarly, *Continuing of Care* was viewed positively by rural MB nurses, although an interesting pattern of results must be noted. These nurses were strongly positive that they have a good understanding of their patients' health history and that they have easy access to their patients' past care provided by healthcare providers in their workplace. However, coordination of care across settings is a different matter. Coordinating care for patients that takes place outside of their

workplace and getting access to information about patients' past health care provided by other healthcare providers outside of their workplace were difficult for rural MB nurses. These two dimensions were perceived negatively.

Rural MB nurses felt positively that their workplace was *Population-oriented*, with a good fit between services and community health care needs and monitoring patient outcome indicators, among other dimensions.

A similar pattern of results is seen for *Community Participation*, which was rated positively by rural MB nurses. These nurses agreed that their workplace supports healthcare providers in thinking of the community as a partner and that their workplace seeks input from the community about which healthcare services are needed.

Finally, there were positive ratings of *Intersectoral Teams*. Even though rural MB nurses were positive that other healthcare providers in their workplace work closely with community agencies, that they personally work closely with such agencies, and that there have been improvements in the way community services are delivered based on community agencies working together, these nurses felt negatively that community agencies meet regularly to discuss common issues that affect health.

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 MB nurses was sufficient for analysis at the provincial level, which is reflected in the substantial response rate for this province (47%). For this reason, we can say the following: with 95% confidence, the sample of rural RNs, NPs, LPNs, and RPNs in MB is representative of rural MB nurses as a whole; say with 85% confidence, the sample of rural RNs in MB is representative of rural MB RNs as a whole; and say with less than 85% confidence, the separate samples of rural 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 (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, 27% of the regulated nursing workforce in Manitoba was located in rural areas where 31% of the population lived (CIHI, 2016a). This is an increase from 2010, when 24% of the nurses in Manitoba cared for 32% of the population (Pitblado, Koren, MacLeod, Place, Kulig, & Stewart, 2013).

A greater proportion of rural nurses in MB reported growing up in the country outside of any city or town compared to rural nurses in Canada overall. Important to note is that a greater proportion of rural nurses in MB reported working in a primary work community with a population of less than 1,000 than rural nurses in Canada overall. Manitoba is mostly rural north of Winnipeg, which contributes to frequent air transport of patients. Despite MB having fly in communities, these findings were not reflected in *RRNII* survey data. However, survey data shows that only 54% of rural MB nurses lived in their primary work community, while 58% travelled daily to their workplace.

Manitoba rural nurses, especially LPNs and RPNs, are older than rural nurses in Canada overall. Interestingly, a greater proportion of rural MB nurses were retired and occasionally working in nursing compared to rural nurses in Canada overall. An aging population is reflected in the higher proportion of rural MB nurses who intend to retire in the next 12 months compared to rural nurses in Canada overall. The potential of a large number of rural MB nurses retiring in the near future is high.

The reasons rural MB nurses came to work in their primary work community were similar to the reasons they continue to work in their primary work community, namely interest in the practice setting, location of the community, family or friends, and income.

A greater proportion of rural MB nurses worked in a nursing home or long-term care facility than rural nurses in Canada overall. A higher proportion of rural MB RPNs worked as CNSs compared to rural RPNs in Canada overall. The large majority of rural MB nurses reported working within their licensed scope of practice.

The proportion of all male nurses working in rural MB was greater than that of rural male nurses in Canada overall. The level of nursing education among rural MB nurses was slightly below the education level of rural nurses in Canada overall.

Rural MB nurses reported a greater responsibility, compared to their Canadian counterparts, for organizing urgent or emergent medical transportation and supervising/mentoring nursing students. Rural MB nurses reported strongly

positively about patient-centred care in their workplace. Interestingly, although continuity of care was viewed positively by rural MB nurses, coordination of care across settings presented difficulties and was perceived negatively.

Although outside the scope of this fact sheet, it is important to acknowledge that MB is made up of many Indigenous communities. Further analyses and a larger sample might reflect this information.

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

	Rural RNs		Rural LPNs		Rural RPNs	
Promotion, Prevention, and Population Health	**MB % (n=189)**	**Canada % (n=2,082)**	**MB % (n=164)**	**Canada % (n=1,370)**	**MB % (n=97)**	**Canada % (n=207)**
Chronic disease management	66.1	62.7	73.2	74.9	46.4	49.8
Maternal/child/family health programs	31.2	35.2	17.7	18.0	6.2	6.8
Lifestyle modification programs	43.9	50.7	43.3	50.1	59.8	58.9
Public and population health programs	38.6	43.4	34.1	32.3	32.0	32.4
Mental health programs	25.9	30.4	37.2	32.4	86.6	79.7
Community development/individual health capacity building programs	10.6	17.7	11.6	12.6	21.6	19.3
Illness/injury prevention	33.9	38.4	48.2	47.4	42.3	38.2
None of the above	18.5	21.8	20.7	17.3	6.2	7.2

Assessment	**MB %**	**Canada %**	**MB %**	**Canada%**	**MB %**	**Canada %**
Complete history and physical assessment	67.2	59.6	81.1	68.5	39.2	39.1
Focused history and physical assessment	75.1	70.3	68.3	61.4	48.5	52.7
Infant and child health assessment	30.7	32.3	9.1	12.5	0.0	0.5
Older adult health assessment	64.6	61.2	84.1	79.7	46.4	50.2
Family assessment	21.2	25.0	18.9	16.9	23.7	21.7
Community assessment	9.5	16.2	12.2	10.6	15.5	15.9
Mental health assessment	40.2	40.7	39.6	34.3	88.7	82.6
Sexual assault assessment/exam	16.9	19.4	3.7	5.0	4.1	5.3
Third party assessment	12.7	18.7	10.4	8.6	4.1	6.3
Other assessment	0.5	2.5	0.6	0.9	1.0	1.9
None of the above	8.5	10.7	6.1	10.8	4.1	5.3

Therapeutic Management	**MB %**	**Canada %**	**MB %**	**Canada%**	**MB %**	**Canada %**
Administering oral/SC/IM/topical/inhaled medications	81.0	80.0	93.3	89.5	68.0	72.9
Dispensing medication	54.5	54.2	72.6	63.8	44.3	50.2
Pharmacy management	18.0	25.3	21.3	15.8	5.2	14.0
Prescribing medication independently	2.6	7.8	4.3	3.3	0.0	1.9
Prescribing medication using protocols or guidelines	22.8	29.5	14.6	11.5	7.2	7.2
Other medication related responsibilities	10.6	8.3	8.5	5.8	18.6	13.5
None of the above	14.3	14.8	5.5	8.6	21.6	19.8

Laboratory Tests	**MB %**	**Canada %**	**MB %**	**Canada%**	**MB %**	**Canada %**
Taking and processing orders for laboratory tests	64.0	64.5	80.5	61.2	42.3	49.8
Ordering laboratory tests	29.1	37.4	32.3	28.5	12.4	23.7
Obtaining samples for laboratory tests	50.8	57.3	57.9	57.0	30.9	34.3
Performing and analyzing on-site laboratory tests	19.0	29.8	20.1	19.7	6.2	10.6
Interpreting laboratory and diagnostic tests	43.9	46.2	36.0	24.5	18.6	25.6
None of the above	20.1	19.6	12.2	18.4	44.3	35.7

	Rural RNs		Rural LPNs		Rural RPNs	
Diagnostic Tests	**MB % (n=189)**	**Canada % (n=2,082)**	**SK % (n=164)**	**Canada% (n=1,370)**	**SK % (n=97)**	**Canada % (n=207)**
Taking and processing orders for advanced diagnostic tests	52.9	46.4	62.2	41.1	29.9	33.8
Ordering advanced diagnostic tests	4.8	8.1	7.9	7.6	1.0	5.3
Performing advanced diagnostic tests	0.0	1.6	1.2	1.3	0.0	1.0
Interpreting and following up advanced diagnostic tests	10.1	13.3	9.8	6.1	8.2	7.7
None of the above	43.9	49.2	34.8	55.8	68.0	63.3

Diagnostic Imaging	**MB %**	**Canada %**	**MB %**	**Canada%**	**MB %**	**Canada %**
Taking and processing orders for diagnostic imaging	59.8	53.7	71.3	48.3	41.2	43.5
Ordering routine diagnostic imaging	15.9	25.7	20.7	16.9	6.2	13.5
Ordering advanced diagnostic imaging	5.3	5.9	9.1	7.4	4.1	9.7
Performing diagnostic imaging	6.3	8.8	0.0	0.9	0.0	0.0
Interpreting and following up diagnostic imaging	11.6	14.3	3.7	3.3	4.1	4.3
None of the above	37.0	39.0	25.6	46.4	54.6	52.2

Diagnosis and Referral	**MB %**	**Canada %**	**MB %**	**Canada%**	**MB %**	**Canada %**
Follow protocols/use decision support tools to arrive at a plan of care	84.1	76.3	82.3	74.3	71.1	74.4
Independently make a nursing diagnosis based on assessment data	69.3	65.9	56.1	36.4	60.8	67.1
Independently make a medical diagnosis based on assessment data	5.8	11.0	4.9	2.8	2.1	5.8
Independently make referrals to other healthcare practitioners	46.0	47.7	37.2	28.5	44.3	47.3
Independently make referrals to medical specialists	8.5	11.0	6.1	4.7	8.2	8.7
Certify mental health patients for committal	2.6	6.8	0.6	0.9	11.3	10.6
Pronounce death	56.1	42.7	26.2	22.9	26.8	28.0
None of the above	6.3	12.6	8.5	20.2	9.3	7.7

Emergency Care and Transportation	**MB %**	**Canada %**	**MB %**	**Canada%**	**MB %**	**Canada %**
Organize urgent or emergent medical transport	59.8	52.0	63.4	35.5	29.9	35.3
Provide care during urgent/emergent medical transportation	43.4	35.4	22.6	19.6	5.2	12.6
Respond/lead emergency calls as a first responder	13.8	17.8	9.8	10.9	13.4	15.0
Respond/lead emergency search and rescue calls in rural, remote or wilderness settings	3.2	5.4	2.4	1.8	3.1	3.4
None of the above	33.3	41.3	28.7	52.8	67.0	60.9

Leadership	**MB %**	**Canada %**	**MB %**	**Canada%**	**MB %**	**Canada %**
Supervising/mentoring nursing students	69.8	66.6	78.0	56.6	76.3	71.0
Supervising/mentoring nursing colleagues	61.4	61.2	42.7	31.9	64.9	55.6
Supervising/mentoring interprofessional students	18.5	19.6	11.6	8.5	26.8	24.6
Supervising/mentoring interprofessional colleagues	16.9	15.2	6.1	6.3	29.9	24.6
Leading a unit/shift in a practice setting	47.6	47.2	41.5	30.7	44.3	50.2
Leading an interdisciplinary health care team	23.8	21.8	23.2	11.6	27.8	33.8
Leading a community group	13.8	10.1	3.7	2.0	12.4	12.1
None of the above	7.9	12.7	14.0	27.4	6.2	9.2