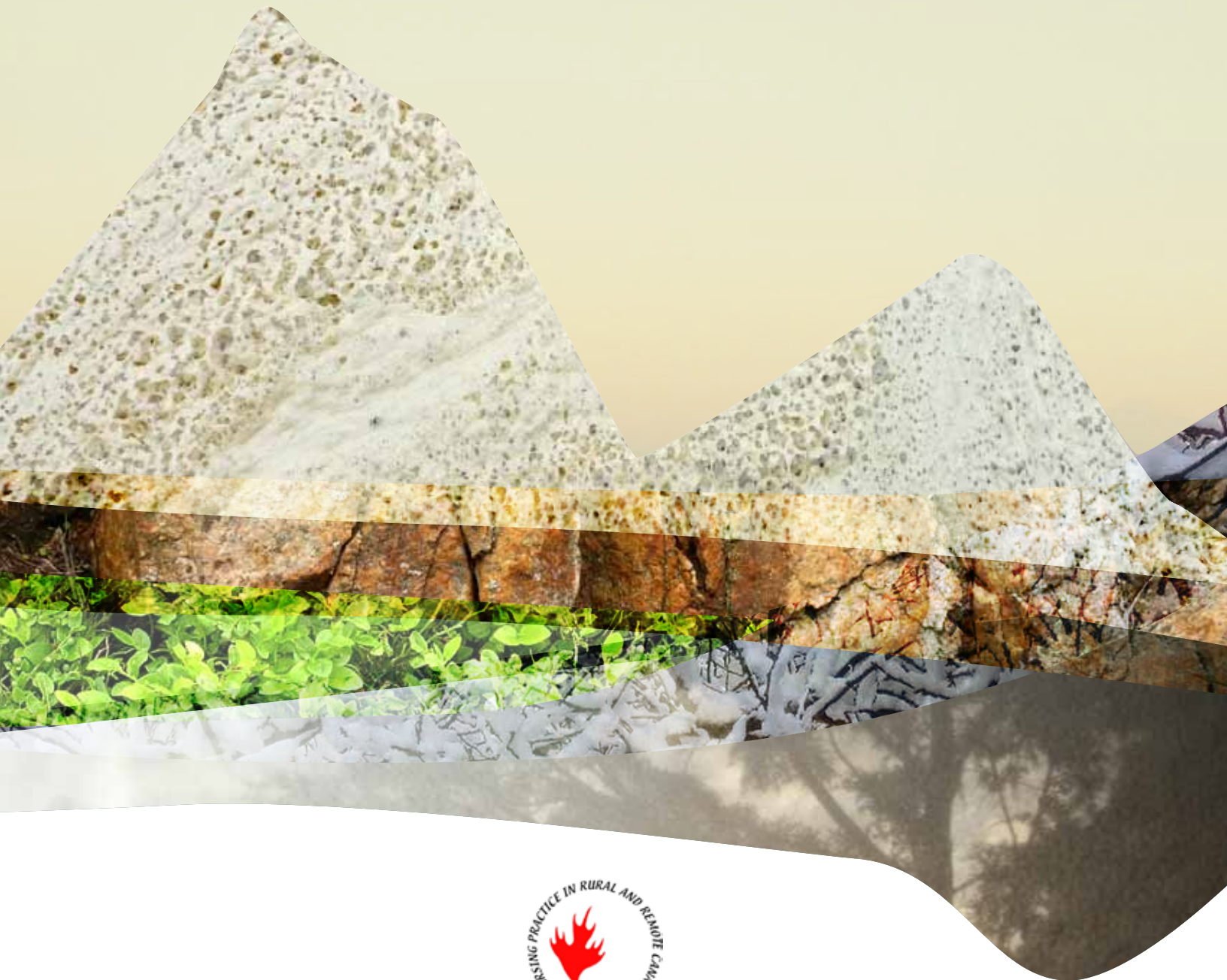


# Characteristics and Distribution of the Regulated Nursing Workforce in Rural and Small Town Canada, 2003 and 2010



## Acknowledgements

This report examines the characteristics and geographical distribution of the nursing workforce in rural and remote Canada based on CIHI's NDB. It was written by the following members of the *Nursing Practice in Rural and Remote Canada II* team: Roger Pitblado, Martha MacLeod, Irene Koren, Jessica Place, Judith Kulig and Norma Stewart.

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Interpretations of the NDB data that are contained in this report are those of the authors and do not necessarily reflect the views of the institutions or individuals who provided their support and assistance.

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# Preface

Between 2001 and 2004, *The Nature of Nursing Practice in Rural and Remote Canada* study was undertaken to examine and articulate the nature of registered nursing practice in rural and remote areas of the country. It remains the only study of its kind, in Canada and abroad, that fully examines national and regional rural and remote nursing within acute care, long-term care, community health, home care and primary care settings. That project was funded by the Canadian Health Services Research Foundation (now known as the Canadian Foundation for Healthcare Improvement) and 21 partners. It was led by four Co-Principal Investigators (Drs. Martha MacLeod, Judith Kulig, Norma Stewart and Roger Pitblado), with a research team of 13 Co-Investigators and an Advisory Team of 24 decision-makers, from all provinces and territories. The lead Advisor to the study, Marion Knock, was Chair of the FPT (Federal, Provincial, Territorial) Committee on Health Human Resources. The dozens of articles, reports and presentations that came out of that first national study continue to inform policy and research (see [ruralnursing.unbc.ca](http://ruralnursing.unbc.ca)).

However, a decade after the initiation of the 2001 research, it is evident that knowledge gaps remain or are emerging. Health human resources (HHR) planning, accessibility, quality and sustainability of rural healthcare continue to be of concern nationally and provincially. It is timely to build on and update the study especially with regard to the implications for rural nursing HHR in areas

such as changes in professional roles of some registered nurses (RNs) (e.g. nurse practitioners [NPs]), internal migration patterns, and primary healthcare transformation and integration. In addition, in the interim the Canadian Institute for Health Information (CIHI) has expanded its nursing databases providing the opportunity to include licensed practical nurses (LPNs<sup>1</sup>) and registered psychiatric nurses (RPNs<sup>2</sup>).

In response, the second national project, referred to as the *Nursing Practice in Rural and Remote Canada II* study, was begun in early 2012 with the following members:

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The success of this national study relies on an Advisory Team that works with the researchers throughout the project to refine the focus of the survey, facilitate access to the survey sample, determine lines of analyses, and to direct the translation of the knowledge created through the study. The Advisory Team includes members from provincial and territorial nursing regulatory bodies (colleges) and

<sup>1</sup> The term LPN includes the registered practical nurses (RPNs) of Ontario.

<sup>2</sup> RPNs are located in the western provinces from Manitoba to British Columbia. See additional information below.

nursing associations, health authorities, federal healthcare providers, and national organizations, including Aboriginal nursing organizations. The Chair of the Advisory Team is Dr. Suzanne Johnston, Vice President, Clinical Services and Chief Nursing Officer, Northern Health, British Columbia.

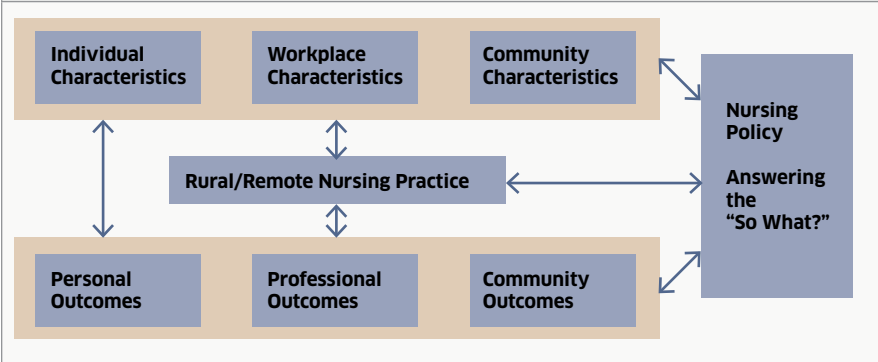
The study is designed to examine and articulate the nature of nursing practice within rural and remote Canada with a focus on primary care, acute care, community health, home care and long-term care settings. Specifically, the project will:

- Include all four types of nurses: RNs, NPs, LPNs, and RPNs
- Provide a better understanding of the complexity of rural/remote nursing practice, especially with respect to primary health care
- Address significant gaps in our understanding about personal, professional and community factors that are involved in recruiting and retaining nurses in rural and remote locales
- Contribute to policy and management discussions on the practice, recruitment, retention and education of nurses in rural and remote Canada.

Figure 1 provides a diagrammatic conceptual framework of the study. The framework emphasizes the interrelatedness of four dimensions – individual, workplace, community and nursing practice – represented by individual, workplace and community inputs (characteristics) and personal, professional, and community outputs (outcomes). At the

**Figure 1**

**Diagrammatic Conceptual Framework for the Study**



centre of the model is rural and remote nursing practice (e.g. scope of practice, practice demands, practice activities, experience of practice). Influencing it are individual (demographics and employment characteristics), workplace (infrastructure and resources), and community characteristics (geography, community resources). In turn these characteristics and features of nursing practice contribute to personal (e.g. stress and health), professional (e.g. organizational commitment, retention), and community (e.g. community connectedness and satisfaction) outcomes. The model explicitly notes that the analyses, how they are reported, and how they are conveyed will address the “so what?” – the needs of policy makers, health service managers, and practitioners for relevant, up-to-date information. The framework also conveys the idea that there are interrelated feedback loops.

There are two central research questions:

- What is the nature of nursing practice in rural and remote Canada?

- How can the access to nursing care in rural and remote Canada be enhanced?

Four major research activities are planned for the *Nursing Practice in Rural and Remote Canada II* study:

- An analysis of the Canadian Institute for Health Information’s 2003 and 2010 Nursing Database (NDB) data (the current report)
- An analysis of policy documents
- A national questionnaire survey of over 9,800 nurses in rural and remote areas across Canada
- The production and distribution of knowledge translation materials that report the study’s findings.

The first two research activities are being done in the first year of the study, 2012-2013. The latter two activities are planned for the remaining three years (2013-2016) of the project.

# Highlights



Some highlights of the statistical profiles of the regulated nursing workforces of Canada are outlined below. These characteristics are drawn from the Nursing Database (NDB) that is compiled by the Canadian Institute for Health Information based on annual submissions of nursing registrars/colleges across the country. The information listed was based on the NDB data years 2003 and 2010. References here and throughout the report to urban or rural designation of RNs exclude Quebec nurses for the 2003 NDB year as Quebec provided the geographical allocation for only the 2010 data year. The latter note does not apply to Quebec LPNs in 2003.

## Workforce Numbers

- In 2010 approximately 11% of RNs (including NPs) worked in rural and small town Canada where 18% of the general population lived.

- The proportions of RNs and NPs whose primary work was in rural Canada decreased from 2003 to 2010, except in Prince Edward Island where the proportion of rural RNs increased from 25.3% in 2003 to 32.2% in 2010.
- From 2003 to 2010, the number of designated NPs increased almost 280% from 656 to 2,486, respectively. This compares with an overall increase of about 11% for all RNs over the same period.
- In 2010 approximately 18% of LPNs worked in rural and small town Canada where 18% of the general population lived.
- There was an increase of almost 29% in the total number of LPNs in Canada, from 63,138 in 2003 to 81,224 in 2010.
- Overall, the proportion of LPNs working in rural Canada decreased from about 21% in 2003 to 18% in

2010. Only Newfoundland and Labrador and Nova Scotia saw marginal increases.

- In 2010 approximately 16% of RPNs worked in rural and small towns in western Canada where 20% of the general population lived.
- There was a marginal increase in the total number of RPNs in western Canada from 5,108 in 2003 to 5,174 in 2010.
- Overall, the proportions of RPNs whose primary place of work was located in rural areas of western Canada decreased from 2003 to 2010.
- In the majority of health regions in Canada in 2010, higher proportions of LPNs worked in rural areas of the country than RNs.
- Rural RN nurse-to-population ratios were lower than those in urban areas in all jurisdictions for 2003 to 2010. Over this time period the RN nurse-



to-population ratios increased in eastern Canada, with the exception of New Brunswick and Ontario and decreased in western Canada.

- From 2003 to 2010 the proportional growth in numbers of LPNs in Canada (almost 29%) far exceeded that of the overall Canadian population (approximately 9%).
- In 2003, higher rural ratios for LPNs in Quebec, Manitoba, Alberta and (to a lesser extent) Ontario contributed to the overall greater rural LPN nurse-to-population ratio than in urban areas of the country. In 2010, Manitoba, Alberta and Nova Scotia had higher rural LPN nurse-to-population ratios than urban but the overall Canadian urban LPN nurse-to-population was greater than in rural Canada.
- Rural and urban RPN nurse-to-population ratios decreased or remained virtually the same from 2003 to 2010 and in all western provinces except Alberta, the rural RPN nurse-to-population ratios in both 2003 and 2010 were lower than the urban RPN ratios.

## Demographics

### Sex

- In the majority of Canada's jurisdictions, approximately 3% to 6% of RNs were male. The exception was Quebec where in 2010 almost 10% of RNs were male in both urban and rural areas. The overall proportions of males in the NP workforce were less than those for RNs generally.
- The proportion of male LPNs increased from 2003 to 2010. The increase was offset by a decrease in the percentage of male LPNs in rural areas of the country.
- Of the regulated nursing workforces in Canada, RPNs had the highest overall proportions of males. The proportions ranged from 20% to 30% in both 2003 and 2010.

### Age

- The aging of Canada's regulated nursing workforces continues. However,

for some nursing groups there is a degree of renewal with the proportion of nurses under 30 years of age larger in 2010 compared to 2003.

- The average age of RNs in Canada increased from almost 45 years in urban areas and just over 45 years in rural areas in 2003 (excluding Quebec RNs) to 45.2 years and 46.6 years, respectively in 2010 (including Quebec).
- In both 2003 and 2010 the majority of RNs were between 45 and 49 years of age, inclusively. In 2010 an increased number of RN ages was between 55 and 59 years, inclusively, and the number of RNs who were less than 30 years of age almost doubled compared with the proportion in that age group in 2003.
- The average age of NPs increased from approximately 44 years in urban areas and almost 45 years in rural areas in 2003, to 45 years and almost 47 years, respectively in 2010.
- In urban Canada the average age of LPNs decreased from 44.4 years in 2003 to 42.8 years in 2010. By comparison the average age of LPNs in rural Canada increased slightly from 44.6 years in 2003 to 44.8 years in 2010.
- Of the regulated nursing workforces of Canada, RPNs are the oldest, on average. The average age of rural RPNs increased from 46.1 years in 2003 to 48.6 years in 2010.

## Employment

### Employment Status

- Full-time employment status of RNs in Canada increased between 2003 and 2010 from 55.5% to 58.5% in urban areas and 50.3% to 53.9% in rural areas. During that time period part-time employment decreased and casual employment increased. Rural RN employment status categories varied greatly from province to province.
- In urban Canada the proportion of NPs in full-time employment increased from 74% in 2003 to almost 80% in 2010. By comparison, full-time

employment of rural NPs decreased slightly from 82.4% in 2003 to 80.1% in 2010. This decrease was accompanied by a decrease in part-time employment and an increase in casual employment.

- Between 2003 and 2010, full-time employment status decreased for urban LPNs from almost 53% to about 51% and increased for rural LPNs from about 43% to 45%. The changes were accompanied primarily by an increase in casual employment for urban LPNs and a loss of part-time and casual employment status for rural LPNs.
- The proportion RPNs with full-time employment status remained above 60% even with a slight decrease from 2003 to 2010. The major difference in employment status during that time period was a significant increase in casual employment for both urban and rural RPNs.

### Multiple Employer Status

- Multiple employer status of RNs varied widely across the country. Generally higher proportions of rural RNs with more than one employer were found in western Canada.
- The proportion of NPs with multiple employers was higher than for RNs in general, increasing from about 19% in 2003 to almost 22% in 2010 for urban NPs and from 14.5% in 2003 to 33.9% in 2010 for rural NPs.
- Overall in Canada, the proportions of both urban and rural LPNs with more than one employer increased from 15 to 16% in 2003 to just over 17% in 2010. Rural LPNs tended to have the same or higher proportions of multiple employers in both 2003 and 2010 in most jurisdictions.
- Multiple employer status increased from about 18% in 2003 to about 24% in 2010 for urban RPNs and decreased from 15% in 2003 to 24% in 2010 for rural RPNs. The proportions of rural RPNs with multiple employers decreased in all western provinces except British Columbia.

## Place of Work

- In 2003, 65% of urban RNs and 53% of rural RNs stated that a hospital was their primary place of work. The proportion of urban RNs working in hospitals remained the same in 2010 but decreased to 45% for rural RNs. The shift of rural RNs out of hospitals was into nursing homes or long-term care facilities and the broader category of Other place of work.
- In 2003, urban NPs were located primarily in community health agencies (41%) and Other places of work (26%). By 2010 there was a significant shift of urban NPs to hospital locations (48%) at the expense of community health agencies (26%). For rural NPs the proportion in hospital decreased from 20% in 2003 to 11% in 2010 and the proportion in Other places of work increased from almost 23% in 2003 to almost 36% in 2010.
- Overall the proportion of LPNs in hospital decreased from 49% in 2003 to 46% in 2010 in urban areas and from 45% in 2003 to 41% in 2010 for rural areas. In 2003 and 2010 respectively between 36% and 37% of urban LPNs worked in a nursing home or long-term care facility. For rural LPNs 44% in 2003 and 42% in 2010 were working in these facilities.
- In western provinces approximately 44% to 45% of urban RPNs were located in hospitals from 2003 to 2010. For rural RPNs the proportion working in hospitals increased from approximately 31% in 2003 to 45% in 2010 and the proportion in the community health agencies decreased from 39% in 2003 to 27% in 2010.

## Position and Primary Responsibility

- The proportions of RNs with direct care responsibility increased from just over 88% to 89% for urban RNs and remained slightly higher at 90% for rural RNs between 2003 and 2010. Slightly higher proportions of rural RNs were involved with administrative activities than their urban counterparts

who conversely had more responsibilities in the areas of education and research than rural RNs.

- Overall, 90% or more of NPs in both urban and rural areas worked in areas of direct care in 2003 and 2010.
- Only about 1% or less of LPNs in either urban or rural areas of the country were involved with administration, education or research in 2003 and 2010. The proportions of LPNs in these areas of responsibility decreased, especially for rural LPNs. By far the largest proportions of LPNs had primary responsibilities in the area of geriatrics/long-term care and these proportions increased between 2003 and 2010 in both urban and rural Canada.
- Approximately 10% of RPNs were involved in non-direct care responsibilities in 2003 and 2010. During that time period, the proportion of rural RPNs in geriatrics/long-term care decreased from 33.4% to 29.5% while the proportions in rehabilitation, acute services and developmental habilitation/disabilities all increased. Between 2003 and 2010 the proportion of RPNs who had primary responsibilities in the area of geriatrics/long-term care decreased almost 4% for rural RPNs and 5% for urban RPNs but increased for acute services (3% and about 2% respectively).

## Education

### Initial Nursing Education

- The proportions of RNs who report that they entered nursing practice with a diploma decreased in every jurisdiction between 2003 and 2010. By 2010 the overall percentage of urban RNs entering practice with a diploma decreased to about 74% for urban RNs and 79% for rural RNs even though in Quebec, 90% of urban RNs and 95% of rural RNs reported a diploma as their initial entry-to-practice nursing education.
- In 2003, 98% of urban and rural LPNs reported they had entered nurs-

ing practice with a diploma or certificate in practical nursing. In 2010 the proportion dropped to 97% for urban LPNs and increased to about 99% in rural areas.

- The majority of RPNs began their nursing careers with a diploma in psychiatric nursing. In 2003, 97% of urban RPNs and almost 99% of rural RPNs reported having a diploma as their entry-to-practice education. In 2010, the percentages were 94% and 92% respectively.

### Highest Nursing Education

- The attainment of baccalaureate credentials increased from 27% in 2003 to almost 40% in 2010 for urban RNs and from 22% to almost 33% in the same period of time for rural RNs. Between 2003 and 2010 the proportion of RNs who gained either a Master's degree or a doctorate in nursing almost doubled for urban RNs and the number of rural RNs with Master's degrees more than doubled.
- Higher levels of nursing education after entry-to-practice education have not been achieved by large numbers of RPNs. However between 2003 and 2010 the proportion of RPNs who attained baccalaureate degrees increased from 6% to 11% for urban RPNs and from 2% to almost 10% for rural RPNs respectively.

### Years Since Graduation

- There was very little difference in the national averages of years since graduation in 2003 and 2010. Urban RNs had a mean of almost 21 years and rural RNs a mean of almost 22 years.
- Distribution of RNs by grouped years since initial entry-to-practice nursing education suggest two things have happened between 2003 and 2010: a push to recruit RNs into the workforce, with more success in urban Canada than rural; and, an effort to retain experienced RNs in the workforce, with more success in rural Canada.

- In 2003 the average number of years since initial nursing graduation was just under 18 years for urban LPNs and 20 years for rural LPNs. These averages decreased to about 15 years for urban LPNs and 18 years for rural LPNs in 2010.
- Distribution of LPNs by grouped years since initial entry-to-practice nursing education suggests a failure to retain older LPNs, especially in urban Canada.
- RPNs, along with RNs, have on average the greatest number of years of experience. Between 2003 and 2010 there was an increase of approximately 1 year in the average years of experience for urban RPNs and approximately 2 years for rural RPNs.
- Distribution of RPNs by grouped years since initial entry-to-practice nursing education suggests that some renewal of the RPN workforce is occurring in both 2003 and 2010. However, the renewal is not compensating for the RPNs who are working longer and increasing the proportions of nurses with greater years of experience.

### Other Education

- The attainment of non-nursing bachelor's degrees increased from about 6% of urban RNs and 3% of rural RNs in 2003 (excluding Quebec) to 8% of urban RNs and slightly over 5% of rural RNs in 2010 (including Quebec). In 2003 and 2010, 2.5% of RNs had gained Master's degrees and significantly less than 1% had gained non-nursing doctoral degrees.
- In comparison with RNs overall, larger proportions of NPs had earned non-nursing degrees.
- Overall the numbers and proportions of LPNs and RPNs with non-nursing educational achievements increased from 2003 to 2010.

## Migration

### International Nursing Graduates (INGs)

- In urban Canada, the proportion of RN INGs decreased slightly from 10% in 2003 to about 9% in 2010. Provincially the proportions ranged from just over 1% in Newfoundland and Labrador and New Brunswick to almost 16% in British Columbia.
- The proportion of RN INGs is much smaller in rural Canada in both 2003 and 2010 than in urban areas of the country. There was a relatively large increase in ING proportions in Saskatchewan and Alberta between 2003 and 2010.
- The primary countries of origin of Canada's urban RN INGs were the Philippines (almost 29% in 2003 and 32.9% in 2010) and the United Kingdom (24% in 2003 and 15.8% in 2010). For rural RN INGs the primary origin countries were United Kingdom (almost 35% in 2003 and 27% in 2010) and United States (22% in both 2003 and 2010).
- The proportion of NP and LPN INGs are very small for both 2003 and 2010.
- For both urban and rural RPNs the percentages of INGs are relatively low for Manitoba and Saskatchewan compared to Alberta and British Columbia in 2003 and 2010. The proportion of INGs decreased in both rural and urban western Canada from 8 to 9% of RPNs in 2003 to about 4% in 2010. Over 80% of RPN INGs came from the United Kingdom.

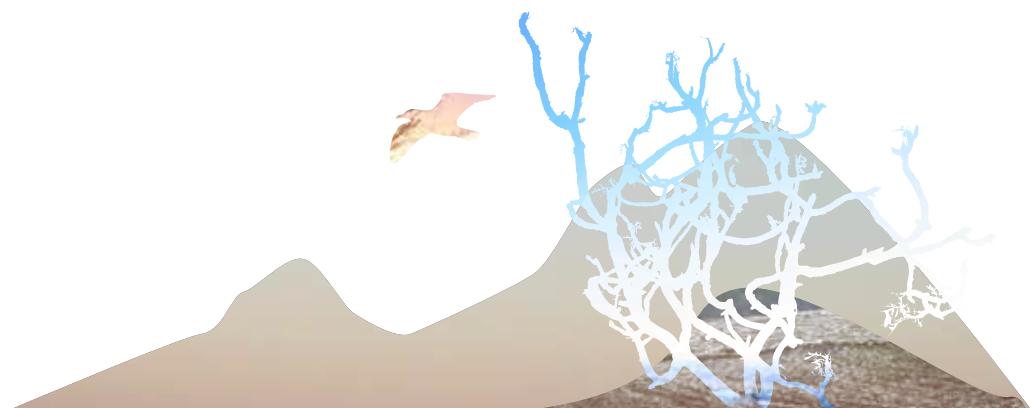
### Interprovincial Migration

- By far the largest majority of Canadian-educated nurses are in practice in the jurisdiction in which they received their initial entry-to-practice nursing education.

- However, between 2003 and 2010 an increasing number of RNs (including NPs) and LPNs were in nursing practice in a different jurisdiction than the one in which they had received their initial nursing education.
- The opposite was true for RPNs as the number of interprovincial migrants, for both urban and rural RPNs, decreased from 2003 to 2010.
- The nurses who did migrate moved primarily to a neighbouring jurisdiction or to one of the "magnet" provinces such as Ontario, British Columbia and Alberta.

# Chapter 1

## Introduction



The primary objective of this report is to provide an empirical, descriptive analysis of the characteristics and overall geographical distribution of the regulated nursing workforces of Canada. With respect to spatial distribution, the focus is on rural areas of the country and, where feasible, comparisons with rural nurses' urban counterparts. At this early stage of the *Nursing Practice in Rural and Remote Canada II* study, limited interpretive discussions are provided.

Numerous commissions and reports in Canada have urged federal, provincial and territorial governments to pay special attention to health human resources issues (Pong and Pitblado 2005). Furthermore, it is well understood that the goal of HHR planning is often expressed as “having the right people with the right skills in the right place at the right time to provide the right services to the right

people” (Birch 2002, 109). The latter task is especially difficult if we do not know some of the basic characteristics of our healthcare workforces and who is working where and when and whether or not they are highly mobile. This has been particularly difficult in rural and remote Canada where there have been very few databases upon which one can assess the characteristics and distribution of the country's healthcare workforce (Pitblado 2007). However, since the original *Nature of Nursing Practice in Rural and Remote Canada* study was initiated, databases have been developed by the Canadian Institute for Health Information (CIHI) which can assist with these assessments. In the context of nursing in Canada, the Nursing Database (NDB) is particularly relevant. The present report is based on data from the NDB, which is outlined below.

### The CIHI NDB

The Canadian Institute for Health Information was created in 1994. One of its primary functions is “to collect, analyze and publish data and information in a standardized way . . . a way that allows every jurisdiction to understand, compare and *use* the data and information effectively to make the decisions that lead to healthier Canadians.”<sup>3</sup>

One of many databases maintained at CIHI is the NDB. The NDB “holds administrative data on each of the three regulated nursing professions in Canada. Regulated nurses include registered nurses (including nurse practitioners), licensed practical nurses and registered psychiatric nurses” (CIHI 2012a, xvii). The initial core of the NDB was the Registered Nurses Database (RNDB), a database that had been inherited by CIHI from Statistics Canada and has been used

<sup>3</sup> Source: [www.cihi.ca](http://www.cihi.ca). See “About CIHI,” “Corporate Strategies,” then “Strategic Plan.”

for research and planning purposes since the 1980s. The RNDB formed the basis of one of the reports from the original *Nature of Nursing Practice in Rural and Remote Canada study: The Supply and Distribution of Registered Nurses in Rural and Small Town Canada* (CIHI 2002). Subsequently, CIHI modified the RNDB to include nurse practitioners and then developed, for the 2002 data year, the Licensed Practical Nurses Database (LPNDB) and the Registered Psychiatric Nurses Database (RPNDB). All three of these databases are now combined into the NDB.

Although data were published for the 2002 LPNDB and RPNDB, 2003 was the first year when these databases were, more or less, fully developed (CIHI 2003a and 2003b). The present analyses employ the 2003 and the 2010 NDB. The 2010 data year was the most current when the *Nursing Practice in Rural and Remote Canada II* study was begun.

## The Canadian Regulated Nursing Supply and Workforce

Each year, nurses from across Canada, and to a lesser extent from outside the country, provide information to one or more provincial/territorial nursing registrars as part of the annual nursing licensing registration process. Administrative data from this registration process are collated by CIHI to create annual contributions to the NDB. (For detailed information about this process, please refer to some of the annual reports listed in the references as well as the data dictionary and processing manuals listed there: CIHI 2012b, CIHI 2012c and CIHI 2012d).

CIHI fundamentally separates the nurses registered with their respective regulatory bodies into two categories: nurses who are currently employed in nursing and nurses who are not currently working in nursing positions. The two categories combined identify Canada's *supply* of nurses. The first category, those nurses who are currently employed in nursing positions, refers to Canada's nursing

*workforce* and is the target of the present report. A brief definition of these nurses and overall supply and workforce numbers are provided below.

### Registered Nurses (RNs and NPs)

The following descriptions of RNs and NPs are drawn directly from the CIHI report entitled *Regulated Nurses: Canadian Trends 2006 to 2010*:

“Registered nurses (RNs) work both autonomously and in collaboration with other health care providers. RNs coordinate health care, deliver direct services and support clients in their self-care decisions and actions in health, illness, injury and disability in all stages of life. RNs contribute to the health care system through their work in direct practice, education, administration, research and policy in a wide array of settings.

Nurse practitioners (NPs) are RNs with additional educational preparation and experience. NPs may order and interpret diagnostic tests, prescribe pharmaceuticals, medical devices and other therapies and perform procedures. NPs often work in primary care settings, such as community health centres or remote nursing stations. As well, NPs may work in other work locations, including clinics, long-term care facilities and hospitals. NPs are licensed in all provinces and territories in Canada except Yukon” (CIHI 2012a, xvii).

The total supply of RNs (including NPs) increased from 258,466 to 287,344 nurses from 2003 to 2010. This represents an overall 11.2% increase, an average increase of 1.6% per year. The majority of RNs who registered in 2003 and 2010 were employed in nursing positions. Excluding those nurses who did not state their employment status (3,674 in 2003 and 5,879 in 2010), 94.7% and 95.4% of RNs were in the nursing workforce in 2003 and 2010, respectively.

Reflecting changes in provincial legislation and increased nursing educational attainment during this 2003-2010 period,

the supply of NPs almost tripled (an increase of approximately 275%) from 681 in 2003 to 2,555 in 2010. Excluding those NPs who did not state their employment status (5 in 2003 and 31 in 2010), 97.0% and 98.5% of nurse practitioners were in the workforce in 2003 and 2010, respectively.

### Licensed Practical Nurses (LPNs)

The following description of LPNs is drawn directly from the CIHI report entitled *Regulated Nurses: Canadian Trends 2006 to 2010*:

“Licensed practical nurses (LPNs) work independently or in collaboration with other members of a health care team. LPNs assess clients and work in health promotion and illness prevention. They assess, plan, implement and evaluate care for clients. LPNs practice in a variety of settings, such as hospitals, homes for the aged, public health units, community nursing agencies, private practices, clinics, doctors' offices, schools, adult day care centres, private homes, community health centres, child care centres and children's camps” (CIHI 2012a, xvii).

The overall supply of LPNs increased from 70,404 in 2003 to 90,308 in 2010. This is a 28.3% increase (annual average of approximately 4%) for this time period. In 2003, 91.7% of the LPNs who provided their employment status were in the workforce. This proportion increased to 93.1% in 2010. The number of LPNs who did not indicate their employment status was 1,568 in 2003 and 3,067 in 2010.

### Registered Psychiatric Nurses (RPNs)

The following description of RPNs is drawn directly from the CIHI report entitled *Regulated Nurses: Canadian Trends 2006 to 2010*:

“Registered psychiatric nurses (RPNs) are regulated separately from other regulated nursing professionals in four provinces and one territory: Manitoba, Saskatchewan, Alberta, British Columbia and Yukon. RPNs

provide services to clients whose primary care needs relate to mental and developmental health. RPN duties include planning, implementing and evaluating therapies and programs on the basis of psychiatric nursing assessments. They often work in acute psychiatry, long-term geriatric care and home care, residential and community programs for the developmentally handicapped, forensic psychiatry, institutional and community-based corrections and community mental health programs” (CIHI 2012a, xvii).<sup>4</sup>

Of the regulated nursing groups examined in this report, RPNs experienced the least change in numbers from 2003 to 2010. In 2003, there were 5,211 RPNs in the overall supply. Almost all (99.9%) of these nurses were in the workforce. By 2010, the number of RPNs overall had only increased to 5,300, a 1.7% increase. Of the 2010 supply, 98.6% of RPNs, who had registered that data year and who had indicated their employment status, were in the RPN workforce. Note that of the overall supply, 96 RPNs and 53 RPNs did not give their employment status in 2003 and 2010, respectively.

## Defining “Rural”

There is no universally accepted definition of *rural* or *remote* in Canada (Pitblado 2005, Kulig et al. 2008). However, over the last decade or so, it would be fair to say that the majority of health status (see, for example, DesMeules et al. 2006) and health human resources (all of the CIHI HHR reports listed in the references) studies have employed the standard geographic classification system of Statistics Canada that differentiates between *urban* areas and *rural and small town Canada* (RST). This system (see, for example, du Plessis et al. 2001) is based on total population numbers and population densities of individual or grouped municipalities, census administrative units known as census subdivisions (CSDs). Urban areas of Canada have core populations of 10,000 or more people;

RST communities (CSDs) have core populations of less than 10,000 people.

Each of these two categories (urban, rural) has subcategories (du Plessis et al. 2001). The categorizations of RST communities are based on the concept of metropolitan influence zones (MIZ), which provide an indication of the proportions of a CSD’s residents who commute to urban areas for work. The subcategories are briefly outlined below:

- **Census metropolitan area:** CMAs are very large urban areas with core populations of at least 1,000,000 people.
- **Census agglomeration area:** CAs are large areas with core populations that range from 10,000 to just under 1,000,000 people.
- **Strong MIZ:** an RST community in which more than 30% of the residents commute to work in an urban core.
- **Moderate MIZ:** an RST community in which between 5% and 30% of the residents commute to work in an urban core.
- **Weak MIZ:** an RST community in which less than 5% of the residents commute to work in an urban core.
- **No MIZ:** an RST community in which fewer than 40 or none of the residents commute to work in an urban core.
- **Territories:** all municipalities in the territories other than Whitehorse and Yellowknife.

These urban and rural categories are presented primarily for information purposes. When this project was initiated, it was intended that all of these classes of communities would be used to report on the characteristics and distribution of Canada’s nursing workforces. Or, at least for the rural and remote areas of Canada, to use CIHI’s groupings where: rural is equated with Strong MIZ and Moderate MIZ communities; and remote is equated with Weak MIZ and No MIZ communities (CIHI 2012a, 119).

Only a very small proportion of this report employs those MIZ categories. CIHI’s agreements with provincial/territorial nursing registrars, provincial/territorial legislation and CIHI’s own privacy and confidentiality protocols, combined, have led to major data suppression in the release of numerical information for this study. For example, if a table cell number ranges from 0 to 9, that cell is suppressed. Further, the last digit of at least one more number in the relevant table will also be suppressed if the first small number can be determined through subtraction. As suggested above with the RST categories, rural and remote areas themselves can be equated in the first instance with small numbers. When those small numbers are then subdivided into the various categories of nursing characteristics, the numbers in table cells become even smaller and are suppressed in CIHI data releases.

## Health Regions

Over the past decade or so, Statistics Canada and CIHI have combined their efforts in order to release health information, both health status and health care indicators, for the health regions of Canada. A *health region* is an administrative area defined by respective provincial ministries of health. During that same period of time, many of those same ministries of health have altered the number and/or boundaries of their provincial health regions. For this analysis, CIHI had linked the NDB records with the health regions in Canada that had existed in 2009. Because of the CIHI data suppression protocols outlined above, very limited use of health regions was permitted for this study. Associating NDB categories with the many health regions in the country produces an enormous number of small cell sizes. As these were suppressed, very few health region NDB numbers were available for this report.

<sup>4</sup>Yukon data for RPNs are not presented in this report as current numbers are so small that they would require suppression in accordance with CIHI’s privacy policies.

## Organization of the Report

The characteristics and geographical distribution of Canada's regulated nurses are presented here using the following themes:

- Workforce numbers
- Demographics
- Employment
- Education
- Migration

Each of the thematic sections of the report begins with brief methodological notes. These provide key definitions and, where necessary, caveats that outline some of the differences in the reporting of nursing registration data elements by various jurisdictions. For more detailed methodological issues, readers are strongly advised to examine the data dictionaries and processing manuals referred to previously and, in particular, Chapter 5 Methodological Notes in *Regulated Nurses: Canadian Trends, 2006 to 2010* (CIHI 2012a).

Descriptive information for each theme follows the brief methodological notes. These are provided, where possible or where relevant, for each of the nursing groups: RNs, NPs, LPNs and RPNs. The focus of the descriptive sections is on rural-urban and 2003 vs 2010 comparisons, particularly at a national level. Supplementary provincial/territorial tables are referred to in these discussions and may be obtained from the website of the *Nursing Practice in Rural and Remote* study (see [ruralnursing.unbc.ca](http://ruralnursing.unbc.ca)). With the exception of the nurse-to-population ratios, the data source for all diagrams and tables in this report is the CIHI NDB. Diagrams and tables reporting nurse-to-population ratios were derived from the CIHI NDB and population estimates from the Census of Canada produced by Statistics Canada.

## Chapter 2

# Workforce Numbers



### Methodological Notes

In most provinces, a nurse is asked to provide at least two postal codes when they complete their annual registration form: postal code of residence and postal code of primary workplace. Using a Statistics Canada postal code conversion file (PCCF), one can use those postal codes to allocate each nurse to one of the urban-rural categories listed in the Introduction of this report and to a health region. For this study, CIHI<sup>5</sup> used a 2009 PCCF (for reference purposes see Statistics Canada 2011) to allocate each NDB record to these location classes. As the purpose of this project is to examine where nurses work, CIHI first used postal codes of primary workplace. In the relatively small number of instances where this was not available, the postal code of residence was employed. This geo-

graphical allocation of NDB records was undertaken for all provinces/territories except Quebec. Quebec itself provided the conversion for the 2010 data year, but not the 2003 data year for RNs/NPs. No urban-rural designation is available for Quebec RNs/NPs for the 2003 NDB data year.

For this, and the majority of the rest of the report, the focus is on the regulated nursing workforce (i.e. not supply). Therefore, the total numbers of nurses examined, in 2003 and 2010, respectively, are as follows: RNs (including NPs) – 241,415 and 268,512; NPs – 656 and 2,486; LPNs – 63,138 and 81,224; and RPNs – 5,108 and 5,174. These numbers combine the totals for both urban and rural nurses in Canada for the two NDB data years discussed in this report.

Counts, percentages, percentage changes and nurse-to-population ratios are provided in this section of the report. With respect to the computation of nurse-to-population ratios, 2011 census data were used with 2010 NDB data to compute these ratios. As there was no census undertaken at the time or within a year of 2003, simple linear regression population estimates, based on 2001 and 2006 census data, were used with 2003 NDB data to compute the 2003 nurse-to-population ratios. The population counts for these census years were drawn from a Statistics Canada product known as *GeoSuite* (Statistics Canada 2002, 2007 and 2012). The computed ratios are expressed as the number of nurses per 100,000 population. Given that the population figures used to compute the ratios are, in effect, estimates, the nurse-to-population ratios

<sup>5</sup> The NDB dataset employed for the present study was prepared by CIHI Health Human Resources staff, including the PCCF allocations of urban and rural and health region location indicators. Access to these data was provided on a secure computer in a CIHI office in Ottawa. Analytical results generated from this NDB dataset by the present authors for this study were not released until CIHI staff had reviewed the tables and suppressed cells with small numbers.



should not be considered as precise figures.<sup>6</sup> Rather, they are correct in terms of their relative magnitudes.

## How many Regulated Nurses Are There in Urban and Rural Canada?

### RNs

In 2010, 28,799 RNs (including NPs) provided postal codes of primary workplace that could be linked to community locations in rural and small town Canada. This number represents approximately 11% of all RNs. Note that in the 2010 NDB data year, 758 of the 268,512 RNs in the Canadian RN workforce did not supply relevant postal codes. An equivalent proportion of RNs working in rural Canada could not be determined for the 2003 NDB data year due to the lack of Quebec data.

The counts of RNs and NPs working in urban and rural areas of the country are provided in Appendices 1 and 2 in the supplementary tables. Table 1, below, identifies the proportions (%)<sup>7</sup> of RNs and NPs who worked in rural areas of each province/territory.

As indicated in Table 1, the proportions of RNs and NPs whose primary place of work was in rural Canada decreased from 2003 to 2010. The exception for RNs overall was in Prince Edward Island where the proportions of rural RNs increased from 25.3% to 32.2% from 2003 to 2010, respectively.

With respect to NPs, perhaps the most significant information in Appendices 1 and 2 and Table 1 was the dramatic increase in the overall number of NPs in Canada and their presence in the majority of provinces/territories in 2010 compared with their limited distribution in 2003. The number of designated NPs rose from 656 in 2003 to 2,486 in 2010, an increase of almost 280%. This compares with an overall increase of about 11% for all RNs over this same period. The NP increases reflect jurisdictional legislative changes over this period of time whereby RNs with additional education and experience have expanded their scope of practice.

### LPNs

From 2003 to 2010 there was an increase of almost 29% in the total number of LPNs in Canada, from 63,138 to 81,224. The counts of LPNs working in urban and rural areas of the country are provided in Appendices 1 and 2. Table 2, below, identifies the proportions (%) of LPNs who worked in rural areas of each province/territory.

Although the proportions of LPNs working in rural areas of Canada were greater than those of RNs, for the most part, those proportions generally decreased from 2003 to 2010. Overall in Canada, the proportion of LPNs working in rural areas of the country decreased from about 21% to about 18%. Only Newfoundland and Labrador and Nova Scotia had seen increases during this period, but those increases were very marginal.

### RPNS

The 2003 to 2010 increase in the total number of RPNS in western Canada (Manitoba, Saskatchewan Alberta, and British Columbia) was very small: 5,108 up to 5,174. This represents just a 1.3%

**Table 1**

Proportions (%) of RNs and NPs Working In Rural Canada, 2003 and 2010				
Registration Location	RNs		NPs	
	% Rural 2003	% Rural 2010	% Rural 2003	% Rural 2010
N.L.	35.2	31.0	60.0	50.0
P.E.I.	25.3	32.2		†
N.S.	28.1	25.3	30.4	29.2
N.B.	28.9	20.2	†	39.1
Que.	††	10.6		10.9
Ont.	6.8	6.0	21.3	15.3
Man.	23.5	18.2		23.5
Sask.	25.9	21.8		53.3
Alta.	16.1	11.0	41.4	6.8
B.C.	7.1	6.2		11.6
Y.T.	†	26.1		
N.W.T./Nun.	†	44.3	†	†
Canada	13.0*	10.8	27.0	19.9

Notes: † data suppressed due to small cell sizes;  
 †† - Quebec RNs and NPs were not allocated to geographical locations in the 2003 NDB data year.  
 \*Consequently, the overall 2003 Canadian % excludes Quebec. Blank cells indicate Not Applicable.

**Table 2**

Proportions (%) of LPNs Working in Rural Canada, 2003 and 2010		
Registration Location	% Rural 2003	% Rural 2010
N.L.	44.9	45.3
P.E.I.	24.1	23.2
N.S.	34.7	36.8
N.B.	34.5	33.1
Que.	22.2	15.0
Ont.	12.5	10.5
Man.	46.0	45.0
Sask.	32.8	32.0
Alta.	26.8	21.1
B.C.	12.3	9.4
Y.T.	†	0.0
N.W.T./Nun.	†	59.3
Canada	21.2	17.5

Note: † data suppressed due to small cell sizes.

<sup>6</sup> Slight methodological differences were employed for this report compared with the NDB reports published by CIHI. Consequently, computed ratios and percentages reported here may not be exact matches for those reported by CIHI.

<sup>7</sup> Percentages in tables and the appendices are rounded to one decimal point.

increase during that time period. The counts of RPNs working in urban and rural areas of the country are provided in Appendices 1 and 2. Table 3, below, identifies the proportions (%) of RPNs who worked in rural areas of each of the western provinces in 2003 and 2010. As indicated in Table 3, there were only marginal changes in the proportions of rural RPNs from 2003 to 2010. In general, even these changes followed the pattern of RNs and LPNs in that there had been a decrease in the proportions of RPNs whose primary place of work was located in the rural areas of those provinces.

Perhaps the most striking aspects of Table 3 are the distinctive differences in the magnitude of the rural proportions: with relatively high values for Manitoba and Alberta, contrasted with the relatively low proportions in Saskatchewan and even lower percentages of rural RPNs in British Columbia. The lower percentages for the latter two provinces are partially explained by psychiatric hospital closures (e.g. in Weyburn, Saskatchewan) or geographical locations (e.g. the Forensic Psychiatric Hospital in Port Coquitlam, i.e. in the urbanized lower mainland of British Columbia).

**Table 3**

**Proportions (%) of RPNs Working in Rural Western Canada, 2003 and 2010**

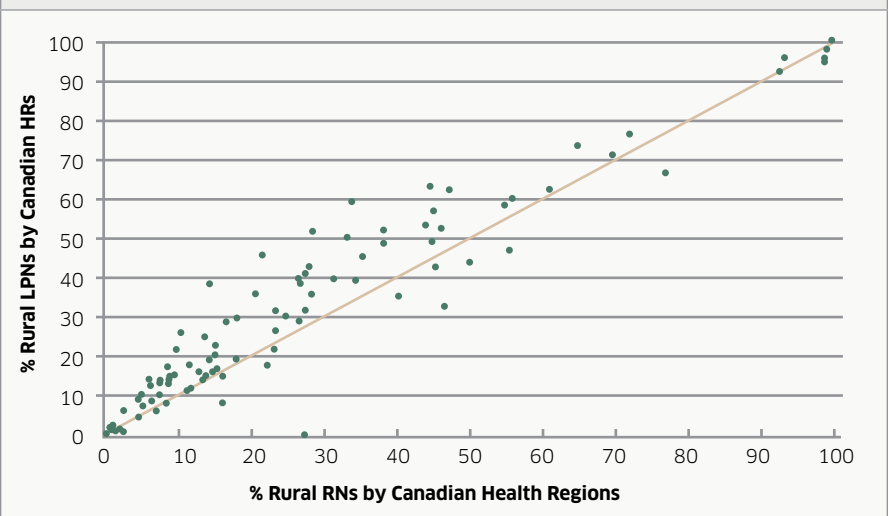
Registration Location	% Rural 2003	% Rural 2010
Man.	31.0	31.3
Sask.	16.7	16.0
Alta.	31.4	29.7
B.C.	3.9	3.4
Canada	17.4	16.4

### Selected Health Region Notes

For this section of the report, the proportions (%) of nurses in each of the major nursing groups (RNs, LPNs and RPNs) whose primary work location was a rural area were determined for each health region of Canada. Various combinations of these percentages were plotted against each other to illustrate the relative

**Figure 2**

**Percentages (%) of Rural LPNs and Rural RNs by Health Regions, Canada, 2010**



contributions of RNs, LPNs and RPNs in providing rural nursing services by health region. The scatter plots exclude a small number of health regions where data were suppressed in accordance with CIHI privacy and confidentiality policies. In each of the diagrams a diagonal line has been plotted from 0% to 100%. If the rural proportions for the respective nursing groups were identical, then all of the points on the scatter plot would fall on this line.

In Figure 2, the 2010 proportions of rural LPNs are plotted against those of RNs for the health regions across Canada. As indicated, the rural percentages of these two groups of nurses are highly associated or correlated. However, the majority of points in Figure 2 are located above the diagonal line. This indicates that in the majority of the health regions of Canada in 2010, higher proportions of LPNs worked in rural areas of the country than RNs.

Figures 3 to 5 employ only those health regions that are located in western Canada (Manitoba, Saskatchewan, Alberta, and British Columbia). In general, in these western health regions in 2010:

- Higher proportions of LPNs worked in rural areas than RNs.
- Higher proportions of RNs worked in rural areas than RPNs.

- Higher proportions of LPNs worked in rural areas than RPNs.

These conclusions concur with the overall provincial/territorial and Canadian observations made earlier (see Tables 2 and 3 and Appendices 1 and 2). But they also show that there are some variations at the sub-provincial/territorial level of analyses.

### Nurse-to-Population Ratios

One of the major challenges of governments, health care planners, researchers and the general population is the geographic maldistribution of health care providers. “Maldistribution refers to the mismatch between the spatial distribution of inhabitants and that of health care providers” (Pong and Pitblado 2005, vii). Maldistribution of health care workers is too often characteristic of rural areas of the world.

The previous section of this report compared the relative urban/rural locations of the major nursing groups of Canada themselves. Here, the numbers of nurses in various jurisdictions are compared to the number of inhabitants in the respective jurisdictions. As indicated previously, the numbers for the general population are based on estimates using Statistics Canada census data. These comparisons are expressed as nurse-to-population ratios (i.e. number of nurses per 100,000 population).

Figure 3

Percentages (%) of Rural LPNs and Rural RNs by Western Canada Health Regions, 2010

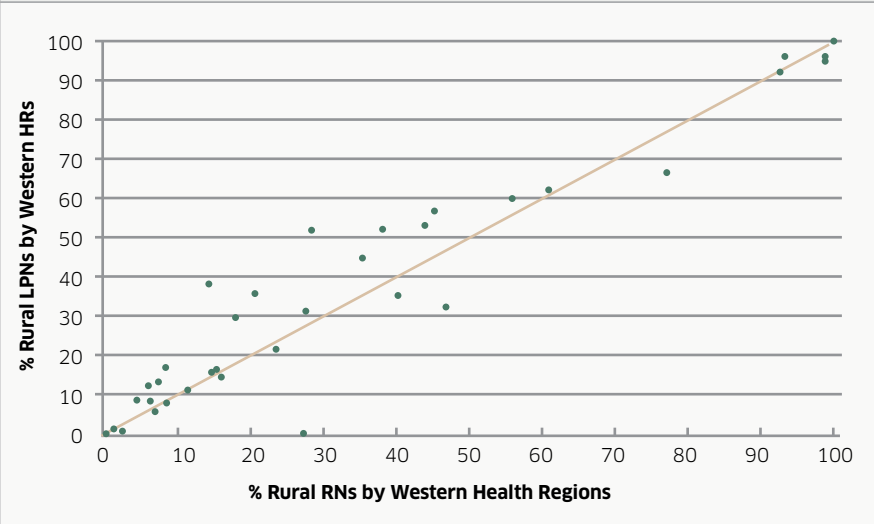
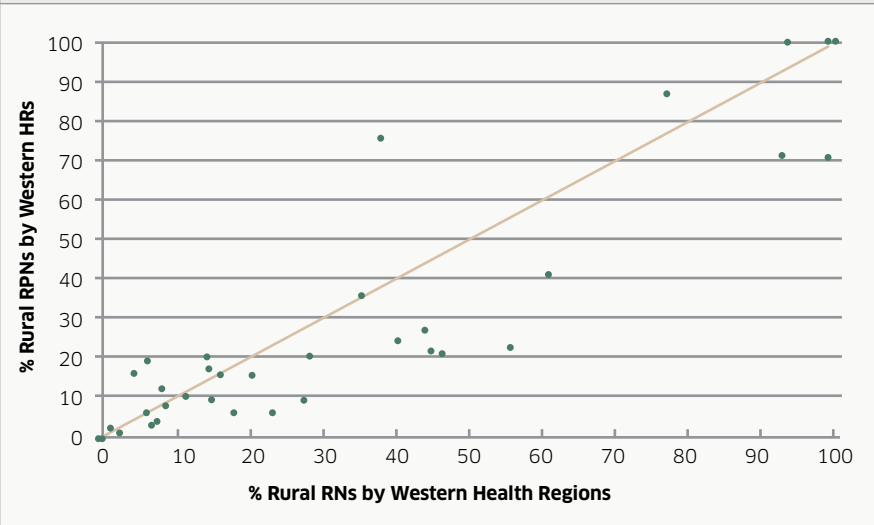


Figure 4

Percentages (%) of Rural RPNs and Rural RNs by Western Canada Health Regions, 2010



Nurse-to-population ratios have long been used as a general guideline to the geographical distribution of HHR resources. But it is recognized that these ratios are only guidelines as “the entire range of nursing services and medical requirements of the population would not be expected to be available in every jurisdiction or geographical unit examined” (in our original report, CIHI 2002, 28).

Appendix 3 lists the nurse-to-population ratios for the three major groups of

nurses in Canada in 2003 and 2010. The ratios are provided, where possible, for urban and rural areas of each province as well as for Canada. Territorial ratios are provided in some of the diagrams below but should be treated with caution as they are based on relatively low numbers. NP ratios are not given due to small cell sizes.

#### RNs

For the 2010 NDB data year, CIHI (2012a, 16) reported that in Canada there were 787 RNs per 100,000 popula-

tion. However, in that year only 11% of RNs in Canada worked in rural and small town Canada. At that time, 18% of the overall Canadian population lived in these rural communities. Consequently, there was a very significant geographical difference in the nurse-to-population ratios: urban – 871 RNs per 100,000 population; and, 477 RNs per 100,000 population. Equivalent figures for the 2003 NDB data year for all of Canada are not available.

Figure 6 and Figure 7 on the next page illustrate the jurisdictional differences in RN nurse-to-population ratios for 2003 and 2010, respectively. Note that in Figure 6 overall Canadian ratios are not provided because Quebec RNs were not allocated to urban/rural locations for the 2003 NDB data year.

Both figures show that rural RN nurse-to-population ratios were lower than those in urban areas in all jurisdictions. In urban areas of each province, with the exception of P.E.I., nurse-to-population ratios increased from 2003 to 2010. In rural areas, the pattern of changes in the ratios differed in eastern Canada compared with western Canada. In the east, with the exception of New Brunswick, the rural RN nurse-to-population ratios increased. The rural RN nurse-to-population ratios in Ontario essentially remained the same over this period of time. By contrast, rural RN nurse-to-population ratios in western Canada decreased from 2003 to 2010.

#### LPNs

From 2003 to 2010 the proportional growth in the numbers of LPNs in Canada (almost 29%) far exceeded that of the overall Canadian population (approximately 9%). However, there was a decrease in the proportions of Canadians living in rural and small town Canada. Estimated percentages were approximately 20% in 2003 and 18% in 2010. During this period of time the proportions of LPNs working in rural areas of the country were approximately 21% in 2003 and just over 17% in 2010. Combi-

Figure 5

Percentages (%) of Rural RPNs and Rural LPNs by Western Canada Health Regions, 2010

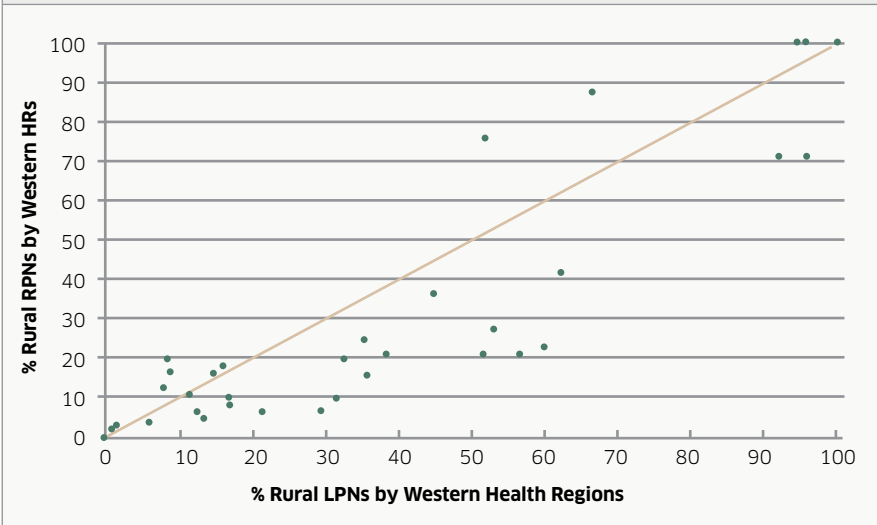


Figure 6

RN Nurse-to-Population Ratios by Province, 2003

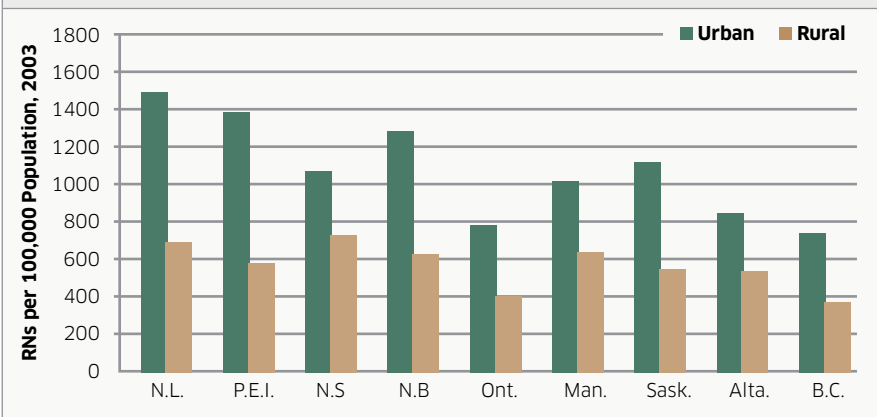
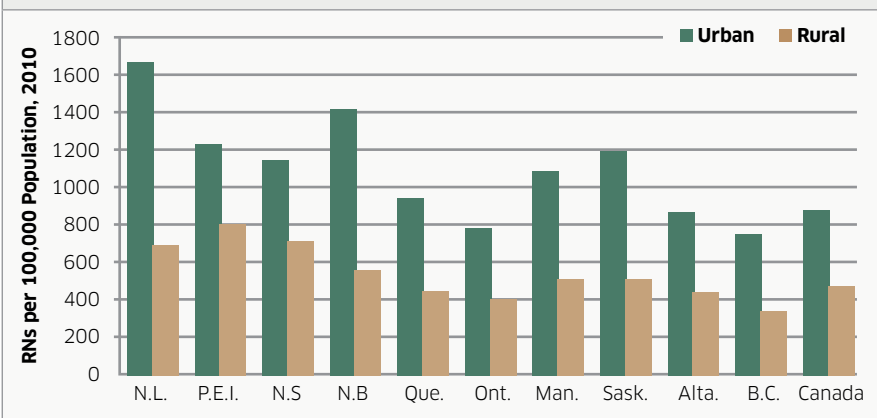


Figure 7

RN Nurse-to-Population Ratios by Province, Canada, 2010



nations of these differences are reflected in the urban-rural and 2003-2010 patterns of LPN nurse-to-population ratios (see Figure 8, Figure 9 and Appendix 3). In general, the distributions and changes in the nurse-to-population ratios for LPNs were more complex than those for RNs.

In Canada overall, the number of LPNs per 100,000 population in 2003 was greater than that of the urban LPN nurse-to-population ratio. Contributing to the higher rural LPN nurse-to-population ratio were the higher rural ratios in Quebec, Manitoba, Alberta and (to a lesser extent) Ontario. In 2010, the overall Canadian urban LPN nurse-to-population ratio was greater than in rural areas of the country. Once again three provinces, in 2010, had higher rural LPN nurse-to-population ratios than the ratios in the urban areas of those provinces; however, of the three, Quebec had been replaced by Nova Scotia.

With the exception of those in Newfoundland and Labrador and Prince Edward Island, urban LPN nurse-to-population ratios increased from 2003 to 2010 in every provincial jurisdiction.

**RPNs**

In western Canada, there were 54 RPNs per 100,000 population (CIHI 2008, 98). From 2003 to 2010 the overall population in the western provinces increased by almost 12%. During that same period of time, the total number of RPNs grew by less than 2% with the result that the overall ratio decreased to 49 RPNs per 100,000 population (CIHI 2012a, 83). Decreasing rural proportions, both of the general population and of the RPN workforce, were also experienced from 2003 to 2010. Appendix 3 and Figures 10 and 11 illustrate the magnitudes and changes in urban and rural RPN nurse-to-population ratios in western Canada.

All (urban and rural) RPN nurse-to-population ratios decreased or remained virtually the same from 2003 to 2010. With the exception of Alberta, in both 2003 and 2010, rural RPN nurse-to-population

ratios were lower than those of the urban RPN ratios.

### Summary

From 2003 to 2010, all of the major groups (RNs, NPs, LPNs, RPNs) of the regulated nursing workforce in Canada increased in absolute numbers. This was particularly the case for NPs and LPNs. There was only a marginal increase in the total number of RPNs. However, the proportions of the total numbers of NPs, LPNs and RPNs who worked in rural areas of the country decreased. This decrease probably occurred with RNs as well but without a 2003 allocation of Quebec nurses this is difficult to confirm.

At the same time, the overall general population increased in absolute terms in both urban and rural areas of the country. The overall population increases were not experienced in all jurisdictions. As well, increases or decreases in nursing populations did not necessarily match those of the general population with resulting impacts on nurse-to-population ratios. Table 4 provides a summary of the changes in these ratios for urban and rural areas of the country from 2003 and 2010. The numbers in this table indicate the percentage change in the ratios over this period of time. In general:

- Urban RN nurse-to-population ratios increased except in Prince Edward Island.

- Rural RN nurse-to-population ratios in eastern Canada (with the exception of New Brunswick) increased or essentially remained the same; in western Canada the rural RN ratios decreased.
- Both urban (with the exception of Newfoundland and Labrador and Prince Edward Island) and rural (with the exception of Newfoundland and Labrador, Prince Edward Island and Quebec) LPN nurse-to-population ratios increased.
- All urban and rural RPN nurse-to-population ratios decreased in all of the western Canadian provinces.

Figure 8

LPN Nurse-to-Population Ratios by Province, Canada, 2003

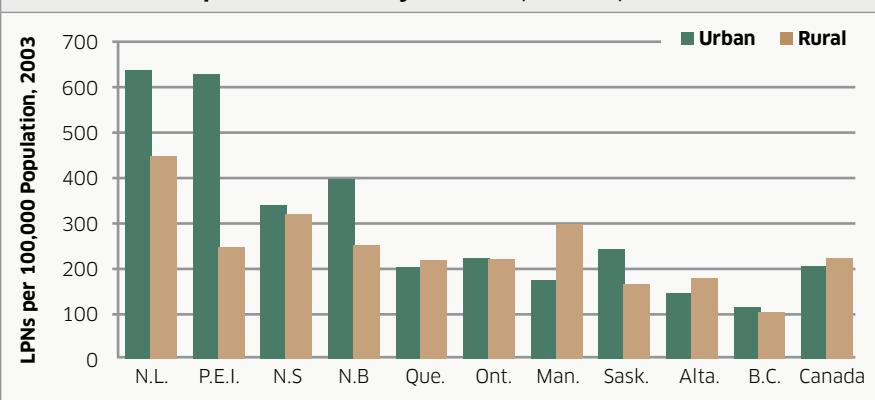


Figure 9

LPN Nurse-to-Population Ratios by Province/Territory, Canada, 2010

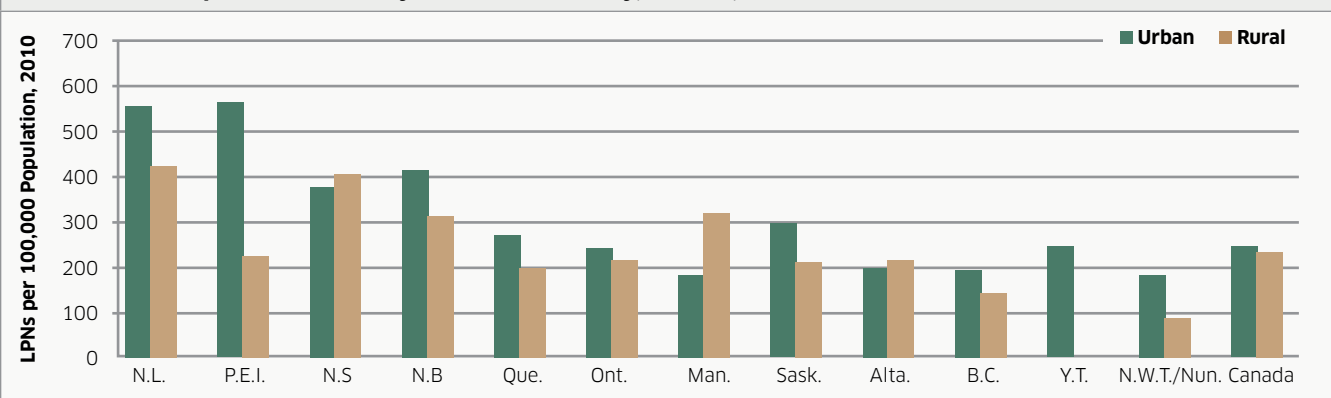


Figure 10

RPN Nurse-to-Population Ratios by Province, Western Canada, 2003

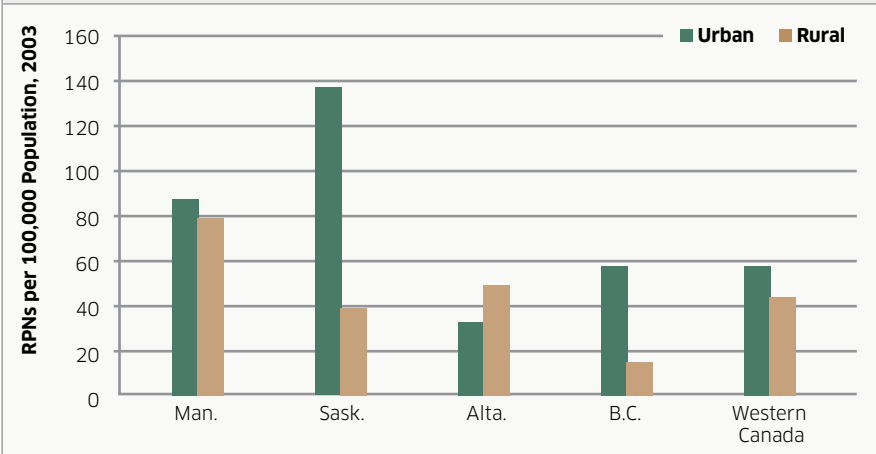


Figure 11

RPN Nurse-to-Population Ratios by Province, Western Canada, 2010

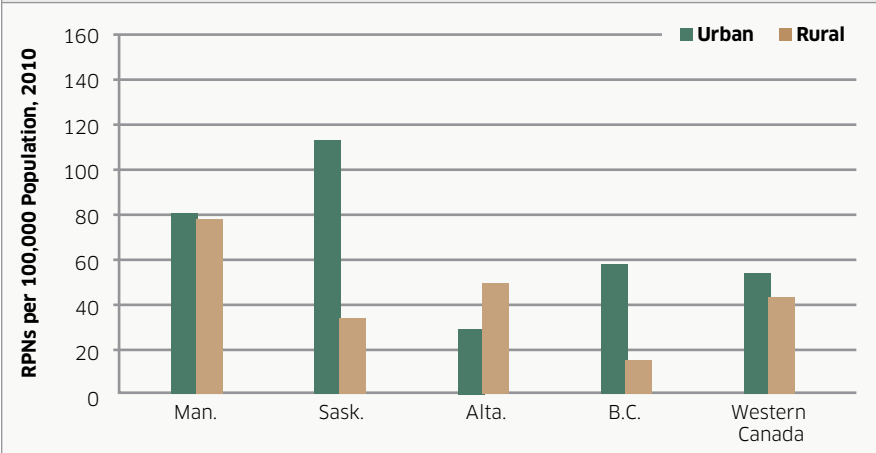


Table 4

Percentage (%) Change in 2003 to 2010 Nurse-to-Population Ratios

Jurisdiction	RNs		LPNs		RPNs	
	Urban	Rural	Urban	Rural	Urban	Rural
N.L.	12.0	1.0	-13.6	-4.6		
P.E.I.	-10.1	40.8	-11.2	-5.5		
N.S.	8.2	0.1	9.1	27.6		
N.B.	10.4	-11.0	2.7	25.2		
Que.	††	††	36.6	-7.8		
Ont.	1.2	0.3	8.6	1.0		
Man.	7.4	-18.8	6.2	7.2	-8.9	-3.1
Sask.	7.4	-5.4	21.5	29.1	-18.4	-14.6
Alta.	3.7	-16.8	34.1	22.1	-15.3	-2.1
B.C.	1.1	-5.4	74.2	40.0	-2.7	-7.0
National	††	††	20.7	6.8	-10.6	-5.0

Notes: †† no urban/rural allocations of RNs were available for RNs in Quebec in 2003. Data were suppressed for the territories due to small cell sizes. The National jurisdiction for RNs and LPNs refers to Canada and Western Canada for RPNs.

# Chapter 3

## Demographic Characteristics

### Methodological Notes

The CIHI Nursing Database contains a limited number of data elements that can be used to describe the demographic characteristics of the regulated nursing workforce of Canada: sex and age.

Since 2007, the College of Registered Nurses of Manitoba (CRNM) has not identified the sex of RNs in the data submitted to CIHI. Instead of Female or Male, this data element has been coded as Other for RNs in this province. This change was brought about “as a result of changes to provincial legislation” (CIHI 2012a, 123).

Traditionally, CIHI has computed the current age of each nurse in the NDB based on the data element Birth Year. Similar to the data element Sex and for the same reason, the CRNM has not submitted this element to CIHI. However, Manitoba has identified each of the

RNs registered in that province by age group. The submitted age groups are compatible with those employed by CIHI in their NDB publications as well as in this report.

### Sex

Counts of Canada’s regulated nursing workforce by female-male composition for 2003 and 2010 are provided in Appendix 4. Table 5 gives a summary by focusing on the proportions of male nurses. See Table 5.

### RNs

In general for both 2003 and 2010, there were higher proportions of male RNs in the urban areas of most provinces compared with equivalent provincial rural areas. In the majority of Canada’s jurisdictions, approximately 3% to 6% of RNs were male. The province that most differs is Quebec. In both urban and rural areas of that province just under 10% of RNs were male. Equivalent figures for Quebec

in 2003 are not available. However, the higher proportion of male RNs in Quebec is not a new phenomenon. Higher proportions of male RNs in Quebec were observed in the 1990s NDB (RNDB) data described in our first report examining rural and urban demographics of RNs (CIHI 2002).

For NPs, there was a slightly larger proportion of males in rural areas of Canada compared with urban locales. That pattern had been reversed by 2010. As well, the overall proportions of males in the NP workforce were less than those for RNs generally.

### LPNs

The variability in the proportions of male LPNs is illustrated in Table 5 for the majority of provinces and territories and for both 2003 and 2010. By comparison with RNs, Quebec does not stand out as several other provinces have similar, and sometimes higher, proportions of

Table 5

<b>Proportions (%) of Males in the Regulated Nursing Workforce, 2003 and 2010</b>				
<b>Regulated Nurses by Jurisdictions</b>	<b>2003</b>		<b>2010</b>	
	<b>Urban</b>	<b>Rural</b>	<b>Urban</b>	<b>Rural</b>
<b>Registered Nurses</b>				
N.L.	4.1	4.2	5.6	4.4
P.E.I.	3.5	<5.0	2.3	2.7
N.S.	3.4	2.2	4.6	2.7
N.B.	4.3	3.6	4.9	3.3
Que.	††	††	9.8	9.6
Ont.	3.9	3.1	5.1	3.5
Man.	5.3	3.6	†††	†††
Sask.	3.8	1.4	6.1	3.1
Alta.	3.5	2.9	5.0	3.0
B.C.	4.7	3.9	6.6	5.8
Y.T.	8.0	0.0	9.5	12.9
N.W.T./Nun.	10.5	9.9	9.4	10.8
Canada	4.1	3.2	6.3	4.9
<b>Nurse Practitioners</b>				
Canada	5.5	5.7	5.0	4.3
<b>Licensed Practical Nurses</b>				
N.L.	17.4	9.7	14.4	8.3
P.E.I.	8.9	<5.0	10.4	<5.0
N.S.	6.0	2.9	6.2	3.2
N.B.	10.7	7.6	12.8	7.7
Que.	7.7	9.2	9.3	7.2
Ont.	6.6	2.2	7.1	2.3
Man.	4.0	3.3	7.0	4.7
Sask.	3.5	<5.0	4.8	1.1
Alta.	5.9	1.9	6.7	1.8
B.C.	9.2	3.9	9.2	4.7
Y.T.	<10.0	0.0	<5.0	0.0
N.W.T./Nun.	<10.0	<10.0	<10.0	<10.0
Canada	7.3	5.1	8.1	4.5
<b>Registered Psychiatric Nurses</b>				
Man.	23.4	25.7	21.4	24.6
Sask.	16.3	10.8	17.1	9.0
Alta.	23.3	32.3	23.2	29.9
B.C.	22.6	30.0	23.8	19.7
Canada	21.7	26.1	22.2	23.8

Notes: <5.0 and <10.0 – estimates resulting from data suppressed due to small cell sizes;

†† Quebec RNs were not allocated to geographical locations in the 2003 NDB data year;

††† Female/Male designations not provided for RNs in Manitoba in the 2010 NDB year due to provincial legislation.

male LPNs. It is interesting to note that in Canada, overall between 2003-2010, there had been an increase in the proportion of male LPNs that had been offset by a decrease in the percentage of male LPNs in rural areas of the country.

### RPNS

Of the regulated nursing workforces in Canada, RPNS have the highest overall proportions of male nurses. In comparison with the primarily single digit proportions for RNs and LPNs, most

proportions of male RPNS in both 2003 and 2010 were in the 20% to 30% range. In 2003, Saskatchewan was the only province with a lower percentage of male RPNS in rural areas of the province. In 2010, however, two provinces (Saskatchewan and British Columbia) had lower percentages than those found in equivalent urban areas of those provinces. As indicated in Table 5, the proportions of male RPNS in western Canada had increased slightly for urban RPNS and decreased by more than 2 percentage points for rural RPNS.

### Age

Detailed age information for Canada's regulated nursing workforces is provided in the appendices supplementary to this report. Included are average ages (Appendix 5) and percentage distributions by age groups (Appendix 6) for both 2003 and 2010. Graphical summaries of age distributions are provided in the figures on the following pages.

### RNs

In 2003, excluding Quebec nurses, the average age of RNs was just under 45 years in urban Canada compared with an average of just over 45 years in rural Canada. By 2010, including Quebec data, urban and rural average RN ages were 45.2 and 46.6 years, respectively. Most provinces and territories followed this pattern with RN average ages, in both urban and rural areas, increasing from 2003 to 2010.

When comparing urban ages with rural ages, only in Newfoundland and Labrador and New Brunswick were rural RNs younger, on average, than their urban counterparts in 2003. The pattern is similar in 2010 although the two provinces with younger RNs, on average, were Newfoundland and Labrador and Prince Edward Island.

The average ages indicated above and in Appendix 5 reflect an aging workforce. This is further illustrated in Figure 12 which focuses on age distribution rather than averages. In both 2003 and 2010,



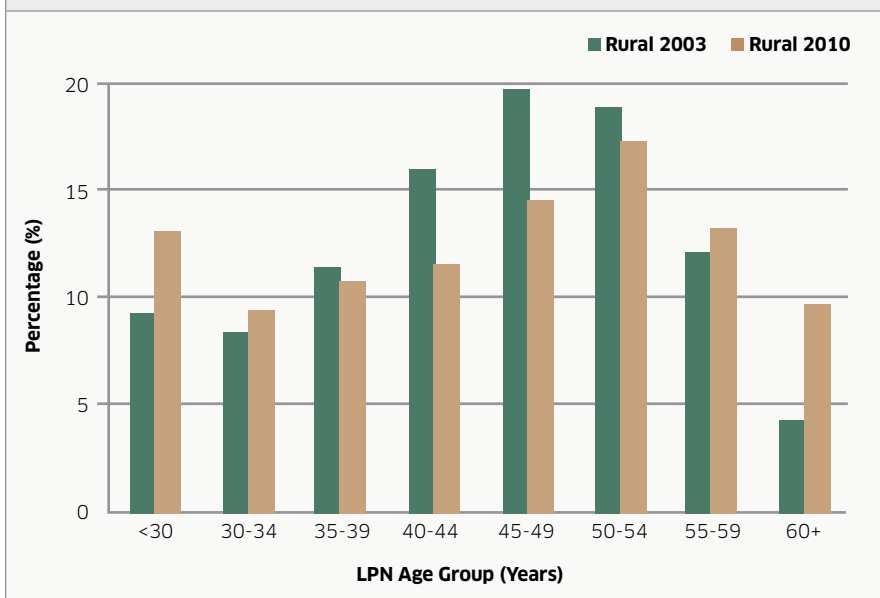
Figure 12

Age Group Distribution (%) of RNs in Rural Canada, 2003 and 2010



Figure 13

Age Group Distribution (%) of LPNs in Rural Canada, 2003 and 2010



the ages of the majority of RNs fell in the 45 to 49 year age group and above. And the aging component is striking in 2010 with increasing RN ages in the 55 to 59 year age group and above. On the other hand, Figure 12 also shows that renewal of the RN workforce is also beginning. In 2010, the number of RNs who were less than 30 years of age almost doubled compared with the proportion in that age group in 2003.

An overall aging pattern is also observed for NPs. In 2003, the mean age of NPs who worked in urban areas of Canada was approximately 44 years and had increased to approximately 45 years in 2010. For rural NPs, average ages increased from just under 45 years to almost 47 years.

### LPNs

In urban Canada, the average age of LPNs decreased from 44.4 years to 42.8 years in 2003 and 2010, respectively. The decreases, from 2003 to 2010, were most notable in larger provinces, ranging from under a year in Ontario to just over 4 years in British Columbia. LPNs in rural Canada had aged slightly, on average, from 44.6 to 44.8 years in 2003 and 2010, respectively. The 2003 to 2010 pattern in the changes of mean ages of LPNs differed in rural parts of most provinces compared with LPNs in urban areas of the equivalent provinces. Mean LPN ages decreased over the 2003-2010 period in only three provinces (Quebec, Saskatchewan and British Columbia). Although not as striking as for RNs, rural LPN mean ages again suggest an aging workforce. This is better illustrated in Figure 13.

Compared with the age distributions of 2003, higher proportions of LPN ages in 2010 fell into the 55 to 59 years and older age groups and there was little difference in the 50 to 54 year age category. Figure 13 highlights the fact that the proportions of LPNs in the younger age categories (less than 35 years of age) are higher in 2010 compared with 2003.

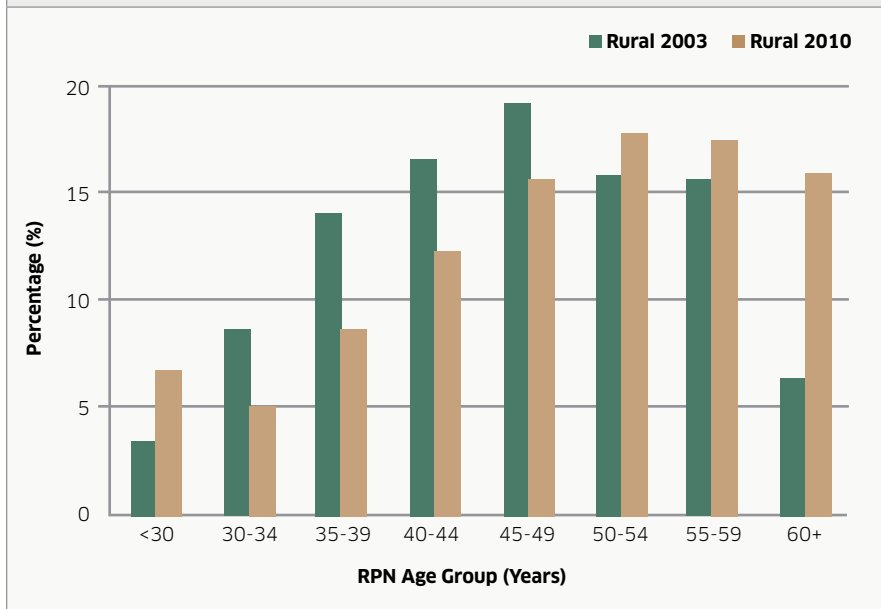
### RPNs

Of the regulated nursing workforces of Canada, RPNs are the oldest, on average. Both urban and rural RPNs were older, on average, in 2010 compared with 2003. For urban RPNs throughout western Canada, mean age increased from 46.3 years to 47.6 years in 2003 and 2010, respectively. Similarly, rural RPN mean ages increased during the 2003-2010 period from 46.1 years to 48.6 years. In all four provinces, both urban and rural average ages increased in this time period.

Again, an age group distribution graph (Figure 14) illustrates the aging characteristic of Canada's RPN workforce. The older age groups from 50 to 54 years and above show higher proportions in 2010 than in 2003. The figure also shows that the aging workforce process

Figure 14

**Age Group Distribution (%) of RPNs in Rural Western Canada, 2003 and 2010**



was well under way even in 2003 with relatively large proportions of RPNs in age categories at or above 40 years of age. Interestingly, there is some degree of RPN renewal with the 2010 proportion of RPNs less than 30 years of age slightly larger than in 2003.

**Summary**

In the majority of Canada’s jurisdictions, approximately 3% to 6% of RNs were male. The exception was Quebec where in 2010 almost 10% of RNs were male in both urban and rural areas. The overall proportions of males in the NP workforce were less than those for RNs generally. The proportion of male LPNs increased from 2003 to 2010. The increase was offset by a decrease in the percentage of male LPNs in rural areas of the country. Of the regulated nursing workforces in Canada, RPNs had the highest overall proportions of males. The proportions ranged from 20% to 30% in both 2003 and 2010.

Quebec nurses) to 45.2 years and 46.6 years, respectively in 2010 (including Quebec RNs). The average age of NPs increased from approximately 44 years in urban areas and almost 45 years in rural areas in 2003 to 45 years and almost 47 years, respectively in 2010. In urban Canada the average age of LPNs decreased from 44.4 years in 2003 to 42.8 years in 2010. By comparison the average age of LPNs in rural Canada increased slightly from 44.6 years in 2003 to 44.8 years in 2010. Of the regulated nursing workforces of Canada, RPNs are the oldest, on average. The average age of rural RPNs increased from 46.1 years in 2003 to 48.6 years in 2010.

The aging of Canada’s regulated nursing workforces continues. The average age of RNs in Canada increased from almost 45 years in urban areas and just over 45 years in rural areas in 2003 (excluding

# Chapter 4

## Employment Characteristics

### Methodological Notes

This section of the report deals with self-identified employment characteristics of the regulated nursing workforce of Canada. The topics dealt with include the following:

- Employment status
- Multiple employers
- Place of work
- Position and primary responsibility

Raw counts and percentages are presented for each of these NDB data elements and many of their sub-elements or categories. For many of these NDB data elements there are a relatively large number of sub-elements. Because our focus is on rural nurses and there are relatively few of them, analyses by all of the sub-elements frequently generates small cell sizes. In turn, these were suppressed by CIHI when the data were released. Consequently, many of the employment

characteristic data elements described here use groups of the sub-elements or categories. In each of the following sub-sections of this chapter, a brief definition or description of these elements is provided. The computed percentages used in the diagrams of this section of the chapter exclude Not Stated responses.

### Employment Status

The categories for this NDB element are: full-time, part-time, casual and not stated. The nursing colleges and CIHI define regular nursing employment as guaranteeing “a fixed number of hours of work per pay period. May be defined by the employer as full-time or part-time, but reflects permanent employment even though it may be time limited” (CIHI 2012b, 8). Casual nursing employment “does not guarantee a fixed number of hours of work per pay period” (CIHI 2012b, 8). For the small number of additional nuances of provincial/territorial

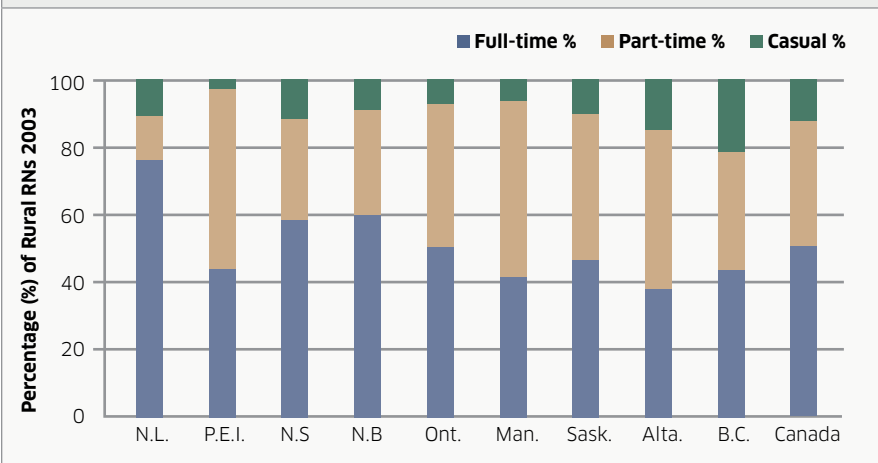
employment status features, one should examine the methodological chapter (Chapter 5) in *Regulated Nurses: Canadian Trends, 2006 to 2010* (CIHI 2012a). For both 2003 and 2010, counts of the employment status categories for the regulated nursing workforces of Canada may be found in Appendix 7.

### RNs

Overall in Canada, full-time employment status increased between 2003 and 2010 from 55.5% to 58.5% for urban RNs and from 50.3% to 53.9% for rural RNs. During that time period, part-time employment decreased while the proportions of RNs in casual employment increased, especially for rural RNs. Percentages for these employment status categories for 2003 and 2010 respectively are as follows: urban RNs – part-time 33.4% to 29.7%, casual 11.1% to 11.8%; rural RNs – part-time 38.2% to 32.7%, casual 11.8% to 13.4%.

Figure 15

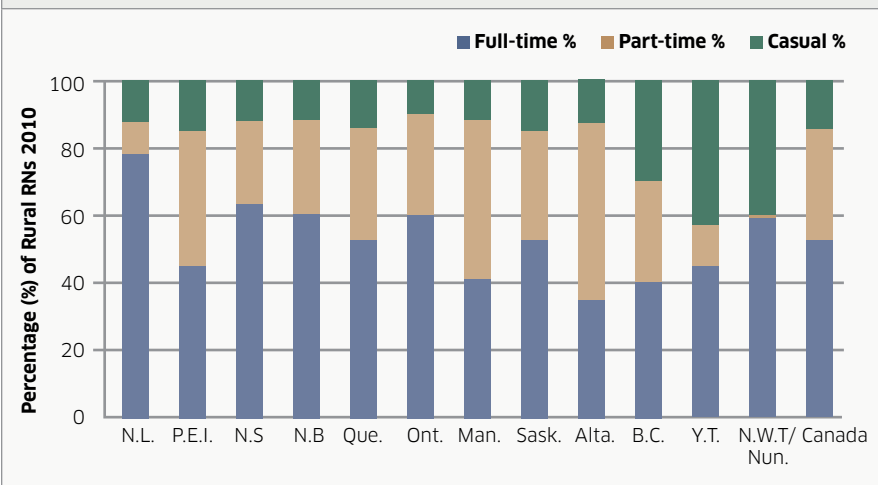
**Employment Status Distribution (%) of Rural RNs 2003**



Figures 15 and 16 show the complex combinations, from province to province, of rural RN employment status categories. With full-time employment, for example, the range in 2003 was from under 40% in Alberta to just over 75% in Newfoundland and Labrador. While there was an increase in full-time employment from 2003 to 2010, the 2010 employment status categories still illustrate a wide variety of combinations from one province or territory to another. Using full-time employment status again as an example, proportions ranged from just under 36% in Alberta to 79% in Newfoundland and Labrador in 2010.

Figure 16

**Employment Status Distribution (%) of Rural RNs 2010**



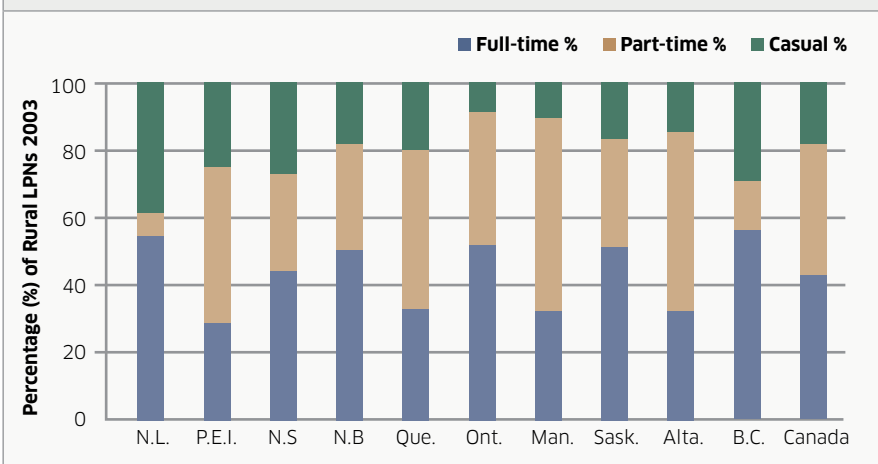
Throughout Canada, urban NPs have also experienced an increase in full-time employment, from 74% in 2003 to almost 80% in 2010. Rural NPs, on the other hand, show the opposite trend with full-time employment decreasing slightly from 82.4% to 80.1% in 2003 and 2010, respectively. That decrease in full-time employment had been accompanied by a decrease in part-time employment, in exchange for an increase in casual employment.

**LPNs**

In both 2003 (Figure 17) and 2010 (Figure 18), there was a wide range of employment status combinations (full-time/part-time/casual) from one province/territory to another. Although the variability in full-time status, for example, is not as great for rural LPNs as for rural RNs, the range in 2003 was from about 29% in Prince Edward Island to about 57% in British Columbia. That range increased for rural LPNs in 2010 from about 33% for Prince Edward Island and Manitoba to almost 76% in Newfoundland and Labrador.

Figure 17

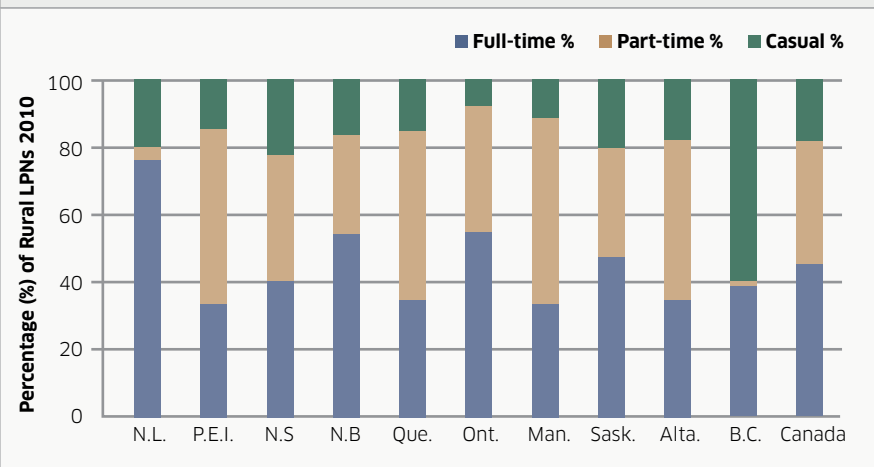
**Employment Status Distribution (%) of Rural LPNs 2003**



The figures in Appendix 7 indicate that full-time employment decreased during the 2003-2010 period from almost 53% to about 51% for urban LPNs. Rural LPNs increased their full-time employment status proportion by a similar 2 percentage point margin, from about 43% to 45% in 2003 and 2010, respectively. The loss of full-time employ-

Figure 18

**Employment Status Distribution (%) of Rural LPNs 2003**



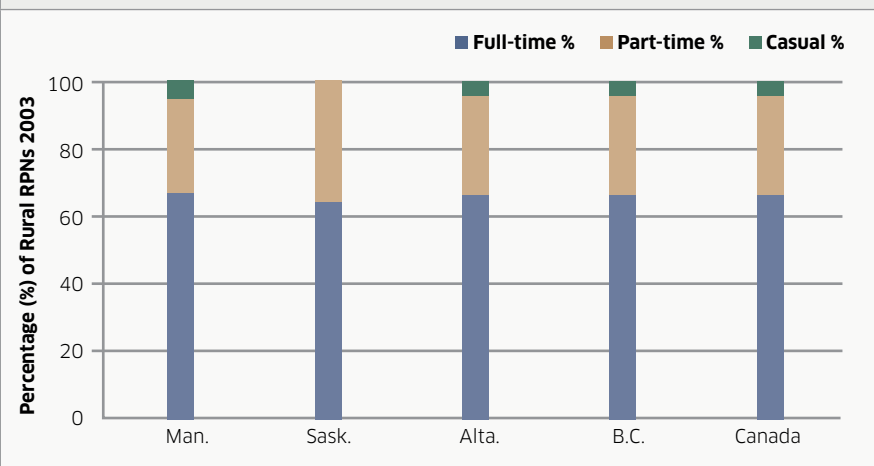
ment for urban LPNs was accompanied primarily by an increase in casual employment, from about 13% in 2003 to just over 16% in 2010. Rural LPNs experienced a loss of approximately 1 percentage point in both part-time and casual employment status proportions, accounting for the 2 percentage point increase in full-time employment from 2003 to 2010.

**RPNs**

Excluding NPs, RPNs have had the highest proportion of regulated nurses in Canada with full-time employment status. Throughout western Canada, these proportions have remained above 60% even with a slight decrease from 2003 to 2010 (see Appendix 7 as well as Figures 19 and 20). For urban RPNs, full-time employment decreased from just over 69% in 2003 to about 67% in 2010. Approximately the same 2 percentage point drop was experienced by rural RPNs, from 66% to about 64% in 2003 and 2010, respectively.

Figure 19

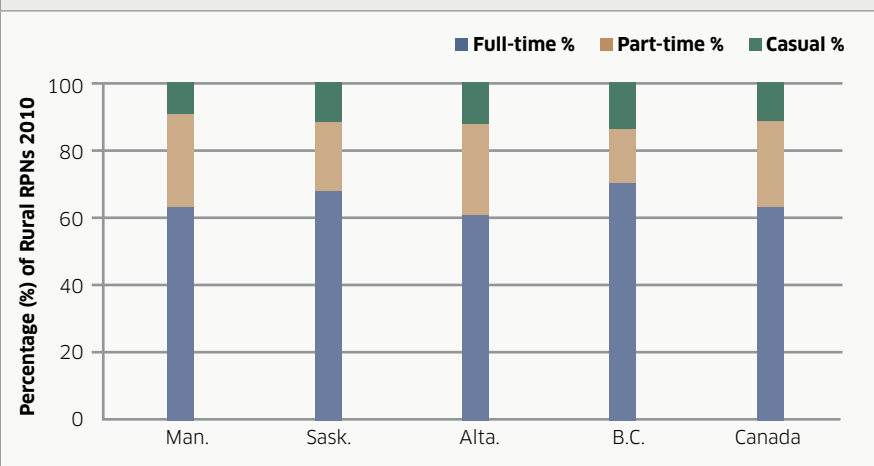
**Employment Status Distribution (%) of Rural RPNs 2003**



The data in Appendix 7 and the figures below highlight the major difference in employment status between 2003 and 2010: a very significant increase in casual employment. This was accompanied, logically, with a decrease in part-time employment. Casual employment proportions doubled for urban RPNs from 7% to just over 14%, and more than doubled for rural RPNs from about 4% to almost 11%.

Figure 20

**Employment Status Distribution (%) of Rural RPNs 2010**



Comparing Figures 19 and 20 with Figures 15 to 18, it is evident that the full-time/part-time/casual combinations vary much less from one province to another compared with those for RNs or LPNs.

**Multiple Employer Status**

This section of the report also provides information about whether nurses have one or more employers. The information available for this analysis is essentially based on the following question and possible answers: *Do you have more than one employer? Yes/No/Not Stated.* If the answer was Yes, a nurse might

have two or more employers. That type of information, i.e. the actual number of multiple employers, was not available for this study. Appendix 8 contains the percentage distribution of nurses who have either one employer or more than one employer.

### RNs

Multiple employer status varies widely from one province or territory to another. Overall, there has been little change from 2003 to 2010 for urban RNs. In both of those years 13.5% of RNs reported having two or more employers. For rural RNs over this same time period there was a decrease of close to 2 percentage points (from 14.8% to 13.1%) in the proportion of nurses with two or more employers. Generally, higher proportions of rural RNs with more than one employer were found in western provinces and the territories.

This measure, multiple employer status, was significantly different for NPs in Canada. The proportion of NPs with multiple employers was higher than for RNs in general and it has been climbing over this time period. In 2003, about 19% of urban NPs had two or more employers, rising to almost 22% by 2010. The contrast was even more significant for rural NPs. For those nurses, multiple employer status rose from 14.5% to 33.9% in 2003 and 2010, respectively.

### LPNs

Overall in Canada the proportions of both urban and rural LPNs with more than one employer increased from 2003 to 2010 (Appendix 8). For both groups of LPNs, 15% to 16% in 2003 and just over 17% in 2010 had two or more employers. In general, in both of those NDB data years, rural LPNs tended to have the same or higher proportions of multiple employers. Particular exceptions were Alberta and British Columbia in 2003. In that year in Alberta, the multiple employer status percentages were about 24% and 18% for urban LPNs and rural LPNs, respectively. The equivalent 2003 percentages for British Columbia were 22% and about 20%, respectively. In

2010, in Alberta the marginal difference decreased but the proportion (19%) of rural LPNs with multiple employers was still less than that (about 22%) for urban LPNs. By way of contrast, the proportions were reversed for British Columbia by 2010 with about 27% and 29% of urban LPNs and rural LPNs, respectively, having more than one employer.

### RPNs

The overall western Canada proportions of urban RPNs with multiple employers increased from about 18% to about 24% from 2003 to 2010, respectively. The overall pattern for rural RPNs was the reverse of this with the proportions of those nurses decreasing from 15% to 13% from 2003 to 2010, respectively. The percentages of rural RPNs with multiple employers decreased in all western provinces except British Columbia.

### Place of Work

The Place of Work NDB data element consists of approximately fifteen sub-elements. Enumeration of these sub-elements by urban-rural nurses and jurisdiction produces a large number small cell sizes. As the numbers in these small cell sizes were suppressed, it was necessary to employ the CIHI grouping as indicated below:

- **Hospital:** Hospital, Mental Health Centre, Rehabilitation/Convalescent Centre

- **Community Health Agency:** Nursing Station (outpost or clinic), Home Care Agency, Community Health Centre, Public Health Department/Unit

- **Nursing Home/Long-Term Care Facility**

- **Other Place of Work:** Business/Industry/Occupational Health Office, Private Nursing Agency/Private Duty, Self-Employed, Physician's Office/Family Practice Unit, Educational Institution, Nursing Association/Government, Other

- **Not Stated**

Appendix 9 lists the place of work counts for the regulated nurses of Canada in 2003 and 2010. The data in that appendix and the figures below provide counts or percentages for the groups of workplaces, excluding Not Stated.

As one might expect, hospital is the place of work that is most frequently cited by all of the nursing workforces. However, the proportions vary considerably when comparing nursing groups or urban and rural nurses.

### RNs

In 2003, 65% of urban RNs worked in hospitals compared with 53% of rural RNs. By 2010, the proportion of urban RNs in hospitals remained the same but by that time only 45% of rural RNs stated that a hospital was their primary

Figure 21

Primary Place of Work of Urban RNs, 2010

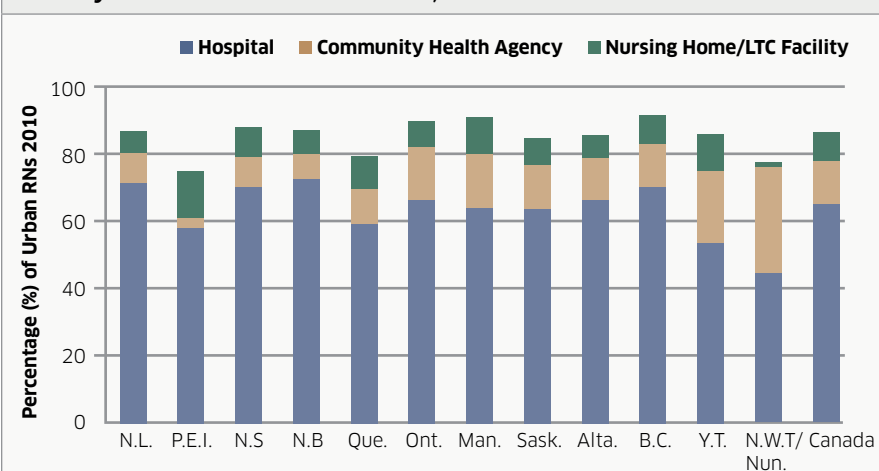
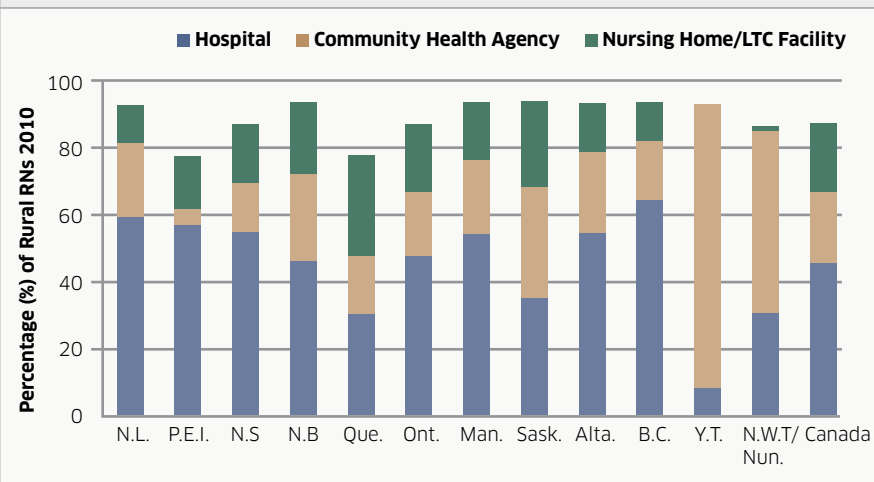


Figure 22

Primary Place of Work of Rural RNs, 2010



place of work. While the 2003 and 2010 proportions by place of work categories remained virtually unchanged for urban RNs, there was a shift for rural RNs out of hospitals into primarily nursing homes and long-term care (LTC) facilities as well as the broader category of Other place of work. With respect to the latter place of work category, see the note about NPs below.

Provincial and territorial variations in place of work proportions for RNs in urban Canada (Figure 21) and rural Canada (Figure 22) are shown for the 2010 NDB data year. These diagrams do not include the percentages for the Other place of work category. That category is implied, i.e. from the remaining heights of the bars in those diagrams.

For urban areas, there was relatively little variation from one province or territory to another in the fundamental combination of hospital, community health agency, nursing home/long-term care facility and Other place of work. Perhaps the only exceptions were in the territories with higher proportions of urban (i.e. Whitehorse and Yellowknife) RNs located in community health agencies. Much larger variations in place of work category combinations can be seen for rural RNs (Figure 22). Most notably were the larger proportions of rural RNs located in a community health agency or nursing home/long-term care facility.

NPs increasingly contribute to these urban-rural variations as their numbers grow. In 2003, urban NPs were located primarily in community health agencies (41%) and Other places of work (26%). But there was a significant shift to hospital locations (48%) for urban NPs at the expense of community health agencies, now down to 26%. From 2003 to 2010 the proportion of rural NPs in hospitals nearly halved, decreasing from 20% to 11%, respectively. Over the same time period, rural NPs working in the Other place of work category rose from almost 23% to almost 36%.

**LPNS**

Although relatively large proportions of LPNs work in hospitals there is a trend in most provinces and territories for that place of work to be replaced by community health agencies and nursing home/long-term care facilities as primary places of work for Canada’s LPN workforce. This is evident in Appendix 9 and when comparing Figures 23 and 24, which show the place of work grouped proportions for urban and rural LPNs in 2010, respectively.

For LPNs in Canada, overall, the proportion of urban LPNs in hospitals decreased from almost 49% to 46% in 2003 and 2010, respectively. A similar decrease occurred for rural LPNs, down from 45% in 2003 to 41% in 2010. Nursing home/long-term care facility continued to

be the category with the second highest proportion of LPNs in terms of place of work. In 2003 and 2010 respectively, between 36 and 37% of urban LPNs worked in a nursing home or long-term care facility. Comparable proportions for rural LPNs working in nursing home/long-term care facilities were 44% in 2003 and 42% in 2010.

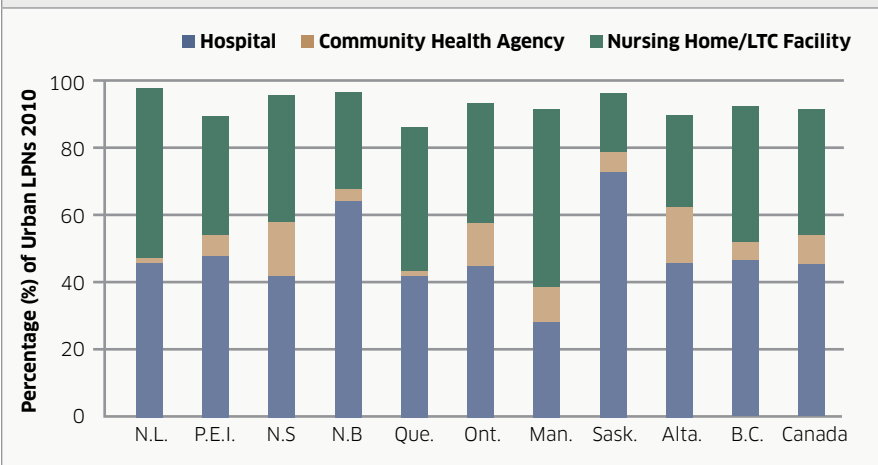
The provincial and territorial variations in the place of work groupings are highlighted for 2010 in Figures 23 and 24 for urban and rural LPNs, respectively. In addition to the notes above are the variations in the proportions of LPNs who work in community health agency locations. For urban LPNs, the range in the provincial proportions of nurses who work in community health agencies in 2003 was from less than 1% in Quebec to 13% in Nova Scotia. By 2010, the range for urban LPNs was from about 2% in Quebec to 16% in both Nova Scotia and Alberta. Overall, higher proportions of LPNs in rural Canada worked in community health agencies. In 2003 the provincial proportions ranged from about 1% in Quebec to 14% in Saskatchewan and by 2010 from 2% in Quebec to 61% in Alberta.

**RPNS**

In western Canada generally, there was little change from 2003 to 2010 in the overall place of work pattern for urban RPNS. Approximately 44 to 45% of urban RPNS were located in hospitals throughout the western provinces. The only change of note was an increase of about 4 percentage points in the proportion of RPNS working in community health agency locations accompanied by a similar decrease in urban RPNS working in nursing home/long-term care facilities. Much larger overall changes occurred for rural RPNS. The proportion of RPNS in rural western Canada working in hospitals increased significantly, accompanied by a similarly significant decrease in the community health agency locations. In 2003, approximately 31% of rural RPNS worked in hospitals, increasing to 45% in 2010. With respect to community health agency locations, the

Figure 23

Primary Place of Work of Urban LPNs, 2010

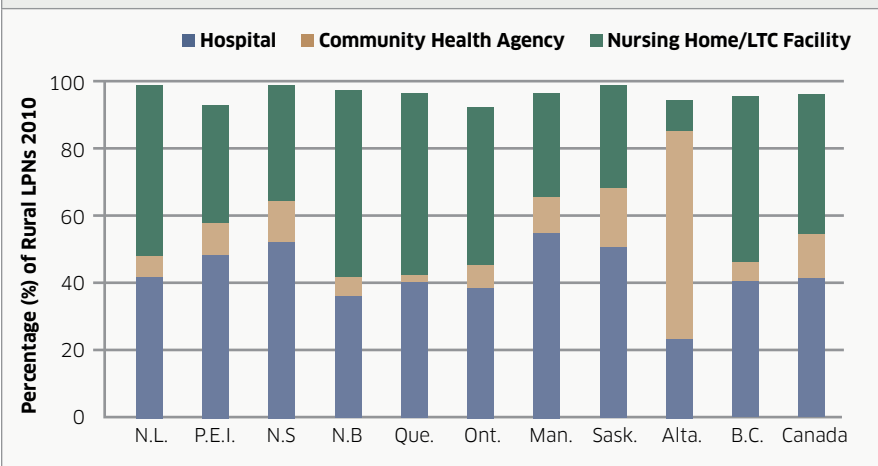


proportion decreased from 39% to 27% in 2003 and 2010, respectively.

Provincial patterns for place of work combinations are notable for both their similarities and differences. In the case of urban RPNs in 2010 (Figure 25), work-place patterns are fairly similar in Manitoba and Saskatchewan with relatively large proportions of these nurses working in nursing home/long-term care facilities in these provinces. In Alberta and British Columbia, on the other hand, the place of work category of hospital was more dominant and fewer proportions of urban RPNs in those provinces worked in nursing homes/long-term care facilities. By comparison, the work place patterns from one province to another for rural RPNs varied (Figure 26). The patterns for Manitoba and Alberta were approximately the same for rural RPNs. The work place combinations for Saskatchewan and British Columbia in 2010 were unique with nursing home/long-term care facilities predominant in Saskatchewan and community health agency locations predominant in British Columbia.

Figure 24

Primary Place of Work of Rural LPNs, 2010



### Position and Primary Responsibility

Numerous sub-elements exist in the NDB for describing the positions and primary responsibilities of the regulated nurses of Canada. As indicated for Place of Work, allocating all of these sub-elements by both urban-rural areas of the country and by jurisdictions led to numerous suppressed cells when the NDB data were examined. Consequently, the CIHI groupings of these sub-elements were employed initially.

The position sub-elements were grouped as follows:

- **Managerial:** Chief Nursing Officer/ Chief Executive Officer, Director/ Assistant Director, Manager/ Assistant Manager
- **Staff:** Staff/Community Nurse
- **Other Positions:** Instructor/Professor/ Educator, Researcher, Consultant, Other, Coordinator/Care Manager,

Figure 25

Primary Place of Work of Urban RPNs, 2010

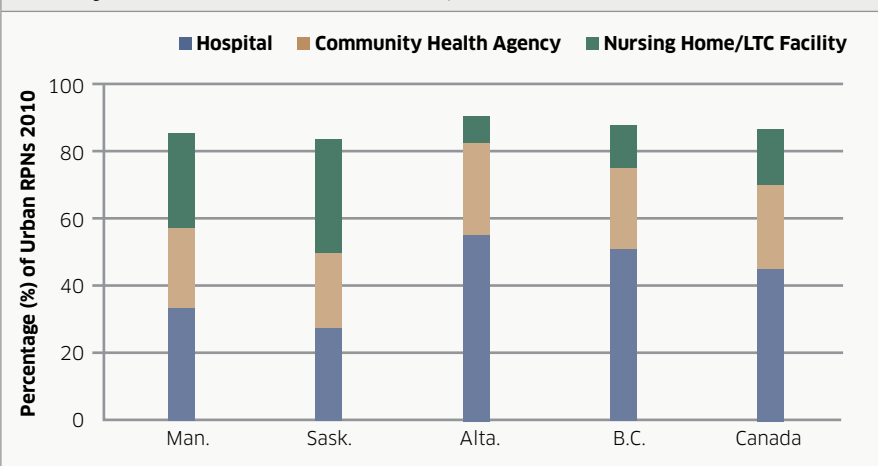




Figure 26

Primary Place of Work of Rural RPNs, 2010

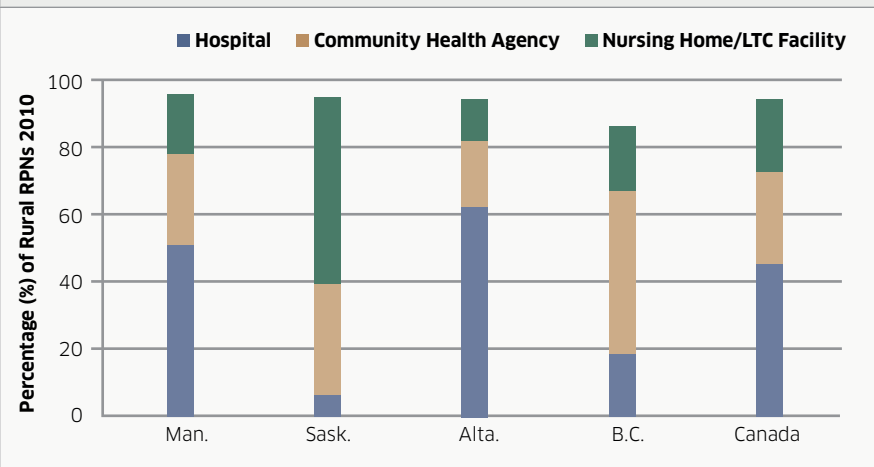
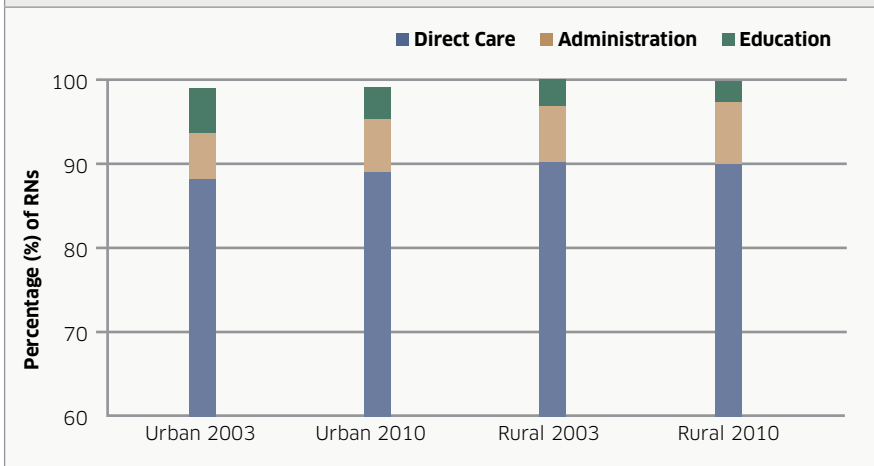


Figure 27

Primary Area of Responsibility of RNs, 2003 and 2010



The focus of this section of this chapter is on the primary responsibilities undertaken by the regulated nursing workforces of Canada. The percentages of the grouped responsibilities used in the diagrams of this section of the chapter exclude Not Stated responses. Urban/rural and provincial/territorial counts of the grouped primary responsibility NDB element may be found in Appendix 11. In addition, tables are included below that identify the proportions of urban and rural nurses by all of the sub-elements of Direct Care. In many instances, these tables include estimated percentages for cells suppressed by CIHI when these data were released for this study.

RNs

In 2003, just over 88% of urban RNs were responsible for direct patient care (Figure 27). In 2010, this proportion had only increased to 89%. The proportions of rural RNs with direct care responsibility were slightly higher at 90% in both of these NDB data years. Generally, higher proportions of rural RNs were involved with administrative activities than their urban counterparts but the difference was slight, in the order of one percentage point. Conversely, urban RNs had more responsibilities in the areas of education and research than rural RNs.

Table 6 lists the percentages of RNs by areas of responsibility for both 2003 and 2010. Note that the 2003 data exclude Quebec, which, as indicated earlier, did not provide a breakdown for urban and rural areas in that province in 2003. All of the percentages in Table 6 (as well as the similar responsibility Tables 7 to 9) were computed with totals that excluded Not Stated.

For the most part, the percentages given for direct care in Table 6 vary little from 2003 to 2010 for each of the two groups of nurses, urban RNs and rural RNs. For example, by proportion and for both NDB data years, twice as many urban RNs (6%) were responsible for maternity/newborn nursing compared with rural RNs (almost 3%). Conversely, half as many urban RNs (almost 9%) were

LPN Specialty, Clinical Specialist, Nurse Midwife, Nurse Practitioner

• Not Stated

The primary responsibility data sub-elements were grouped as follows:

- **Direct Care:** Medicine/Surgery, Psychiatry/Mental Health, Paediatrics, Maternity/Newborn, Geriatrics/Long-term Care, Critical Care, Community Health, Ambulatory Care, Home Care, Occupational Health, Operating Room/Recovery Room, Emergency Care, Several Clinical Areas, Oncology, Rehabilitation, Palliative Care, Public Health, Other Direct Care
- **Administration:** Nursing Service, Nursing Education, Other Administration

- **Education:** Teaching Students, Teaching Employees, Teaching Patients/Clients, Other Education
- **Research:** Nursing Research Only, Other Research
- **Not Stated**

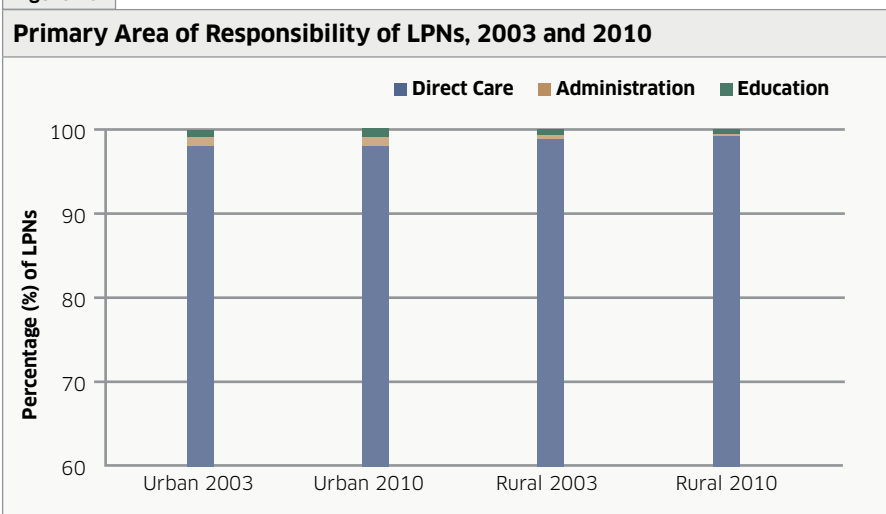
For this report, position has not been found to be very useful. This is because of the fact that NPs have been grouped into the major position category of Other positions and, for the most part, there is a relatively high correlation between position and primary responsibility, with the latter providing more useful information about what nurses are actually doing. Although Appendix 10 provides counts and percentages for the grouped positions, there is no discussion of that table in the text of this report.

**Table 6**

<b>Proportions (%) of RNs by Area of Responsibility by Urban and Rural Locations, Canada, 2003 and 2010</b>				
<b>Primary Responsibility</b>	<b>2003</b>		<b>2010</b>	
	<b>Urban</b>	<b>Rural</b>	<b>Urban</b>	<b>Rural</b>
<b>Direct Care</b>				
Medicine/Surgery	16.3	14.9	17.4	13.3
Psychiatry/Mental Health	5.3	2.3	5.5	2.4
Paediatrics	3.4	0.8	3.1	0.2
Maternity/Newborn	6.2	2.9	6.1	2.7
Geriatrics/Long-term Care	8.8	16.7	8.8	17.2
Critical Care	8.7	3.0	8.1	2.1
Community Health	6.7	10.7	4.8	9.4
Ambulatory Care	2.4	1.1	2.7	1.2
Home Care	1.9	4.9	2.4	5.8
Occupational Health	1.4	0.9	1.1	0.8
Operating Room/Recovery Room	4.8	3.3	5.1	3.0
Emergency Care	5.2	6.9	6.4	9.6
Several Clinical Areas	4.3	15.0	2.5	10.0
Oncology	2.2	0.6	1.5	0.5
Rehabilitation	1.6	0.7	1.6	0.7
Public Health			2.8	3.3
Telehealth			0.5	0.6
Other Direct Care	8.9	5.8	8.9	7.5
<b>Total Direct Care</b>	<b>88.1</b>	<b>90.4</b>	<b>89.2</b>	<b>90.3</b>
<b>Administration</b>	<b>5.6</b>	<b>6.6</b>	<b>6.3</b>	<b>7.1</b>
<b>Education</b>	<b>5.1</b>	<b>2.8</b>	<b>3.7</b>	<b>2.4</b>
<b>Research</b>	<b>1.1</b>	<b>0.2</b>	<b>0.8</b>	<b>0.1</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: 2003 information excludes Quebec. Blank cells indicate Not Applicable.

**Figure 28**



responsible for geriatrics/long-term care nursing compared with their rural counterparts (around 17%).

Overall, 90% or more of NPs work in areas of direct care. This is the case for both urban and rural NPs and for both NDB data years. Table 7 is provided here primarily for information only. It shows the differences by areas of responsibility for urban and rural areas of the country as reported by NPs for both of the NDB data years. This table should be used with caution because of the very large proportion of NPs who did not specify their primary area of responsibility.

**LPNs**

Extremely small proportions of LPNs in 2003 and 2010 worked in areas where their primary responsibilities did not involve the direct care of patients. Only about 1% or less of LPNs in either urban or rural areas of the country were involved with administration, education or research. In addition, as Figure 28 and Table 8 indicate, the proportions of LPNs in these areas of responsibility are decreasing, especially for rural LPNs.

Between 2003 and 2010, there was a decrease in the number of rural LPNs who had primary responsibilities in many of the areas of direct care (see Table 8). For example, the numbers of rural LPNs who had primary responsibilities in medicine/surgery and psychiatry/mental health decreased. However, the number of rural LPNs who have primary responsibilities in geriatrics/long-term care, community health and home care increased over this period of time. The pattern was similar for LPNs working in urban areas. By far the largest proportions of LPNs had primary responsibility in the area of geriatrics/long-term care and these proportions increased between 2003 and 2010 in both rural and urban parts of the country. Conversely, the proportions of LPNs with primary responsibility in the areas of medicine/surgery, psychiatry/mental health and several clinical areas decreased for both rural and urban counterparts during this time period.

Table 7

<b>Proportions (%) of NPs by Area of Responsibility by Urban and Rural Locations, Canada, 2003 and 2010</b>				
<b>Primary Responsibility</b>	<b>2003</b>		<b>2010</b>	
	<b>Urban</b>	<b>Rural</b>	<b>Urban</b>	<b>Rural</b>
<b>Direct Care</b>				
Medicine/Surgery	~3	~2	9.3	2.9
Psychiatry/Mental Health	1.3	0.0	~2	~1
Paediatrics	1.5	0.0	6.5	0.0
Maternity/Newborn	~1	~2	2.1	0.0
Geriatrics/Long-term Care	~5	~2	6.3	2.1
Critical Care	~3	~2	~4	~1
Community Health	8.4	18.5	6.0	16.0
Ambulatory Care	9.5	8.7	6.6	3.3
Home Care	~1	0.0	<1	0.0
Occupational Health	~1	~2	<1	~1
Operating Room/Recovery Room	0.0	0.0	<1	~1
Emergency Care	5.7	6.9	4.1	2.9
Several Clinical Areas	14.1	24.9	2.5	10.5
Oncology	~1	0.0	1.0	0.0
Rehabilitation	~1	0.0	0.7	0.0
Public Health			~2	~1
Telehealth			<1	0.0
Other Direct Care	35.3	28.9	39.8	53.6
<b>Total Direct Care</b>	<b>90.5</b>	<b>93.6</b>	<b>94.1</b>	<b>93.0</b>
<b>Administration</b>	<b>~3</b>	<b>~3</b>	<b>2.4</b>	<b>3.7</b>
<b>Education</b>	<b>6.5</b>	<b>~3</b>	<b>3.3</b>	<b>3.1</b>
<b>Research</b>	<b>~1</b>	<b>0.0</b>	<b>&lt;1</b>	<b>&lt;1</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: the ~ symbol indicates an estimate. A symbol such as <1 indicates a percentage less than 1.0. Blank cells indicate Not Applicable.

## RPNs

Approximately 10% of rural and urban RPNs were involved in non-direct care responsibilities in 2003 and 2010 (Figure 29), with percentages increasing marginally over this time period.

Of the rural RPNs working in direct care in 2010, 29.5% worked in geriatrics/long-term care, 20.1% in acute services, 17.2% in rehabilitation, and 9.2% had primary responsibilities described as Other direct care (see Table 9). For urban RPNs working in direct care in 2010, the four most common primary responsibility categories (in order of greatest to lesser proportion) were acute service, geriatrics/long-term care, Other direct care and forensic services. From 2003 to 2010, the proportion of rural RPNs in geriatrics/long-term care de-

creased by 3.9%, while the proportions in rehabilitation, developmental habilitation/disabilities and acute services all increased. There were no or very minor changes to all other categories of primary responsibilities for rural RPNs working in direct care.

The largest proportions of RPNs had primary responsibility in the areas of geriatrics/long-term care and acute service. Between 2003 and 2010 these proportions decreased for geriatrics/long-term care for both rural RPNs (almost 4%) and urban RPNs (5%) but increased for acute service (3% and about 2% respectively). Rehabilitation was another area of responsibility that increased and for rural RPNs this area ranked third overall, increasing from just over 14% in 2003 to just over 17% in 2010.

## Summary

The majority of nurses in Canada are employed full time and, in general, the proportions of nurses who were employed full time increased from 2003 and 2010. However, the percentages of full-time employment status varied considerably amongst the major groups of the regulated nursing workforce of Canada. In 2010, for example, the proportions of rural RNs who were employed full time are as follows: RNs – 54%, NPs – 80%, LPNs – 45% and RPNs – 60%. This period of time also saw an increase in the proportions of nurses who were employed on a casual basis, rather than full-time or part-time.

Multiple employer status of RNs varied widely across the country. Generally higher proportions of rural RNs with more than one employer were found in western Canada. The proportion of NPs with multiple employers tended to be higher than for RNs in general. Overall in Canada the proportions of both urban and rural LPNs with more than one employer increased. On the other hand, from 2003 to 2010 there were decreases in the proportions of rural RPNs with multiple employers, with the exception of RPNs in British Columbia.

Over the period from 2003 to 2010, the proportions of rural RNs working in hospitals decreased to less than 50%. Significantly lower proportions of NPs worked in hospitals, but it appears that annual registration place of work categories do not adequately account for the various institutional settings where NPs are employed. With respect to LPNs, especially in rural areas of the country, highest proportions in the range of 40% were located in nursing homes or long-term care facilities. For RPNs, on the other hand, similar percentages of these nurses were employed in hospitals.

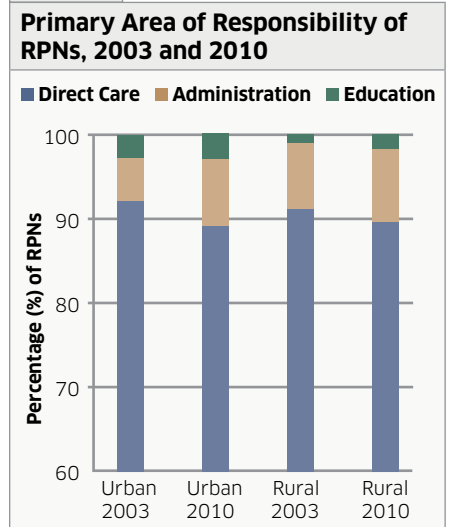
Direct care responsibilities were characteristic of by far the majority (88% or more) of nurses in all of the major groups of the regulated nursing workforce of Canada. Although relatively

**Table 8**

<b>Proportions (%) of LPNs by Area of Responsibility by Urban and Rural Locations, Canada, 2003 and 2010</b>				
<b>Primary Responsibility</b>	<b>2003</b>		<b>2010</b>	
	<b>Urban</b>	<b>Rural</b>	<b>Urban</b>	<b>Rural</b>
<b>Direct Care</b>				
Medicine/Surgery	19.5	17.9	17.6	16.1
Psychiatry/Mental Health	6.4	2.3	5.4	1.8
Paediatrics	1.1	<1	1.4	<1
Maternity/Newborn	1.5	<1	1.5	<1
Geriatrics/Long-term Care	40.9	47.7	42.3	49.1
Critical Care	<1	<1	<1	<1
Community Health	2.9	1.6	4.3	2.5
Ambulatory Care	1.6	1.2	1.7	1.4
Home Care	1.6	<1	1.9	3.4
Occupational Health	<1	<1	<1	<1
Operating Room/Recovery Room	1.7	<1	2.4	<1
Emergency Care	<1	1.1	1.7	1.3
Several Clinical Areas	7.2	14.5	5.3	13.0
Oncology	<1	<1	~2	<1
Rehabilitation	3.9	1.3	3.9	1.6
Palliative Care	1.4	1.0	1.8	<1
Public Health			<1	<1
Other Direct Care	6.5	7.1	5.8	6.3
<b>Total Direct Care</b>	<b>97.9</b>	<b>98.6</b>	<b>97.9</b>	<b>99.1</b>
<b>Administration</b>	<b>1.0</b>	<b>0.7</b>	<b>1.0</b>	<b>0.5</b>
<b>Education</b>	<b>0.9</b>	<b>0.6</b>	<b>1.0</b>	<b>0.5</b>
<b>Research</b>	<b>0.1</b>	<b>0.1</b>	<b>&lt;1</b>	<b>&lt;1</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

small, slightly higher proportions of rural RNs were involved with administrative activities than their urban counterparts who conversely had more responsibilities in the areas of education and research than rural RNs. Very few LPNs in either urban or rural areas of the country were involved with administration, education or research in 2003 and 2010. Only about 10% of RPNs were involved in non-direct care responsibilities in 2003 and 2010.

**Figure 29**



Note for both tables: the ~ symbol indicates an estimate. A symbol such as <1 indicates a percentage less than 1.0. Blank cells indicate Not Applicable.

**Table 9**

<b>Proportions (%) of RPNs by Area of Responsibility by Urban and Rural Locations, Canada, 2003 and 2010</b>				
<b>Primary Responsibility</b>	<b>2003</b>		<b>2010</b>	
	<b>Urban</b>	<b>Rural</b>	<b>Urban</b>	<b>Rural</b>
<b>Direct Care</b>				
Medicine/Surgery	1.4	<1	<1	<1
Paediatrics	<1	<1	<1	0.0
Geriatrics/Long-term Care	19.0	33.4	14.0	29.5
Crisis/Emergency Services	4.2	2.9	6.2	3.0
Occupational Health	<1	0.0	<1	0.0
Oncology	<1	0.0	0.0	<1
Rehabilitation	8.1	14.1	8.5	17.2
Palliative Care	<1	0.0	<1	<1
Other Direct Care	13.1	13.7	12.5	9.2
Children/Adolescent Services	5.5	3.5	5.8	3.3
Developmental Habilitation/Disabilities	6.2	<1	3.9	<1
Addiction Services	2.1	1.9	3.3	3.6
Acute Service	23.2	17.1	24.8	20.1
Forensic Services	8.8	2.8	8.7	2.0
<b>Total Direct Care</b>	<b>92.2</b>	<b>91.2</b>	<b>89.0</b>	<b>89.7</b>
<b>Administration</b>	<b>4.6</b>	<b>7.6</b>	<b>8.0</b>	<b>8.4</b>
<b>Education</b>	<b>2.6</b>	<b>1.2</b>	<b>2.7</b>	<b>1.7</b>
<b>Research</b>	<b>0.6</b>	<b>0.0</b>	<b>0.2</b>	<b>0.2</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

# Chapter 5

## Education Characteristics

### Methodological Notes

The topics dealt with in this chapter are as follows:

- Initial nursing education
- Highest nursing education
- Years since graduating with entry-to-practice education
- Other education

Urban/rural counts for these NDB elements for the regulated nursing workforce in Canada are provided in the appendices. As in previous chapters, the diagrams included in this section of the chapter are based on percentages computed excluding those nurses who did not provide responses to the education questions on their annual registration form.

### Initial Nursing Education

Initial nursing education refers to the nursing program that allowed a nurse

entry into practice, leading to initial registration/licensure as an RN,<sup>8</sup> LPN or RPN. Detailed counts for the initial nursing education (entry-to-practice education) for the regulated nurses of Canada may be found in Appendix 12.

### RNs

Decades ago RNs entered nursing practice having first received a diploma in nursing, often from a hospital diploma education program. Legislative changes and practices, primarily in the last decade or so, have resulted in the majority of jurisdictions now requiring a baccalaureate degree in nursing as the principal educational requirement for entry-to-practice. These changes are clearly reflected in the data provided in Appendix 12 and in Figures 30 and 31. In both urban (Figure 30) and rural (Figure 31) Canada, the proportions of RNs who report that they entered nursing practice with a diploma decreased in every jurisdiction between 2003 and 2010.

In 2003, the proportion of urban RNs entering practice with a diploma ranged from about 76% in New Brunswick and Alberta to 87% in Ontario. Overall in Canada, excluding Quebec, 83% of urban RNs reported in 2003 that their entry-to-practice education was at the level of a diploma. By 2010, that overall percentage had decreased to about 74%. This significant decrease incorporates Quebec data where 90% of urban RNs still reported a diploma as their initial entry-to-practice nursing education. The 2003 to 2010 decrease in diploma for entry-to-practice education is also seen for rural RNs (Figure 31) although the decrease was less than that for urban RNs. Overall in rural Canada, the proportion of diploma-prepared RNs was 86% in 2003 and just over 79% in 2010, both figures larger than those for urban RNs. The range in proportions of rural RNs with a diploma as entry-to-practice education was from 73% in

<sup>8</sup> NPs are not dealt with explicitly in this section as there were coding differences by some jurisdictions for this NDB data element (CIHI 2012a).

Figure 30

Proportion (%) of Urban RNs with a Diploma as Entry-to-Practice Education

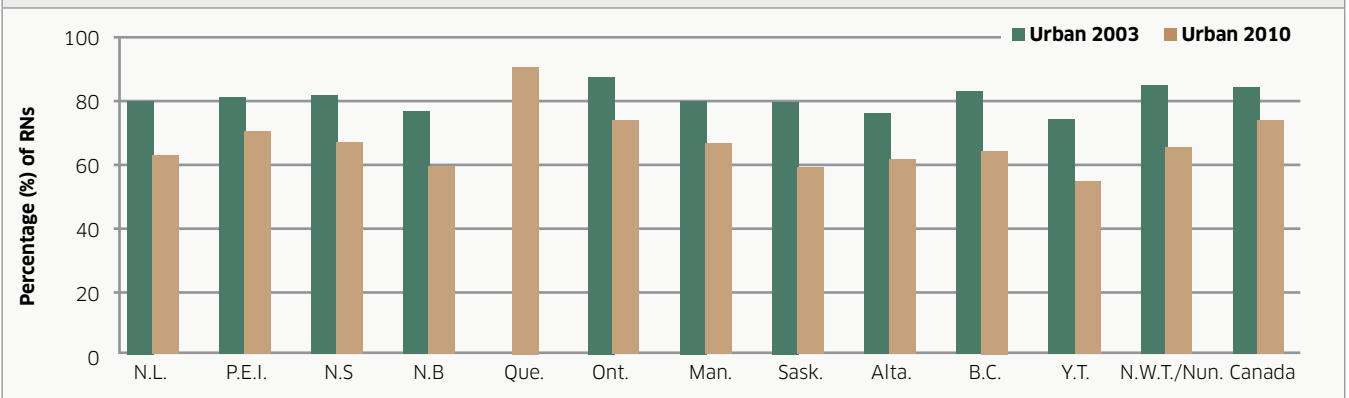
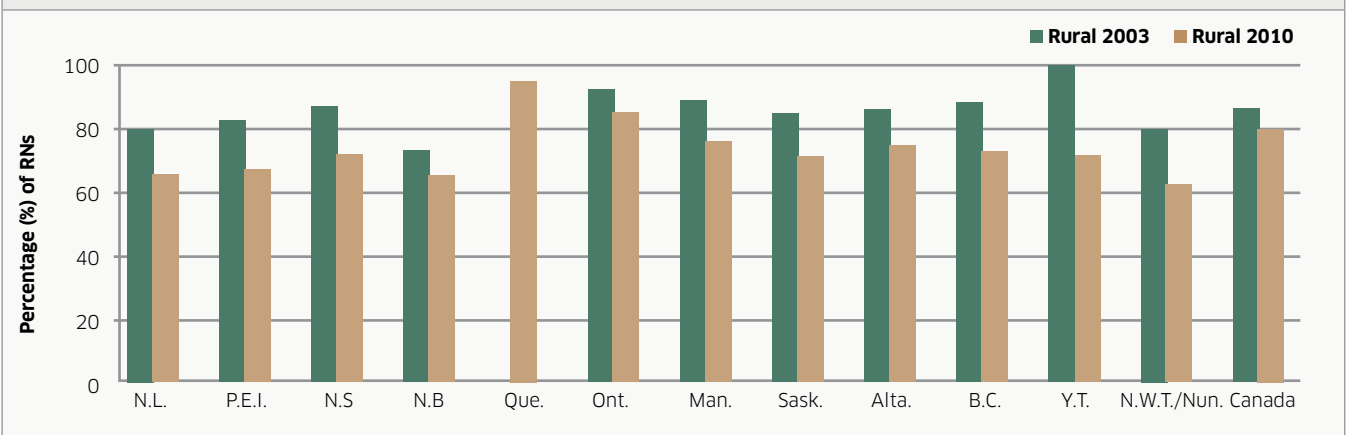


Figure 31

Proportion (%) of Rural RNs with a Diploma as Entry-to-Practice Education



New Brunswick to 92% in Ontario in 2003. Note that again no equivalent data were available from Quebec for this NDB data year. Decreases are seen once more by 2010 with the proportions of diploma-prepared RNs ranging from 65% in Newfoundland and Labrador and New Brunswick to 85% in Ontario. In 2010, 95% of rural RNs in Quebec reported that their entry-to-practice nursing education was at the level of a diploma.

**LPNs**

The basic level of entry-to-practice education for LPNs is a nursing diploma or certificate (depending on jurisdiction) in practical nursing. Equivalency status is granted by individual jurisdictions for nurses who have the required educational background either from another Canadian jurisdiction or from another country.

In 2003, 98% of urban LPNs reported that they had entered nursing practice with a diploma or certificate in practical nursing. The remaining 2% had received equivalency status. The proportion of diploma/certificate-prepared urban LPNs dropped slightly to 97% in 2010. For rural LPNs, the proportion of nurses with a diploma/certificate in practical nursing as entry-to-practice education was also 98% in 2003, rising to close to 99% in 2010. In general, the highest proportions of LPNs, both urban and rural, with equivalency status were found in the western provinces. For example, of the LPNs in urban Manitoba, 9.5% and 12.5% in 2003 and 2010, respectively, entered LPN nursing practice with equivalency status. The highest proportions in this initial education status group for rural LPNs were in 2010 at 6.3% in Manitoba and 6.1% in British Columbia.

**RPNS**

The initial entry-to-practice education pattern for RPNS is similar to that of LPNs. That is, the overwhelming majority of RPNS began their nursing careers with a diploma in psychiatric nursing. For urban RPNS throughout the western provinces, 97% and 94% in 2003 and in 2010, respectively, reported having a diploma as their entry-to-practice education. The percentages for rural RPNS were almost 99% in 2003 and 92% in 2010. The province that stands out as having higher proportions of RPNS with a baccalaureate nursing degree as entry-to-practice is Manitoba. In 2003, almost 6% of RPNS reported their initial nursing education as a baccalaureate degree and this figure jumped to almost 24% by 2010. Rural RPNS also had significant proportions of degree-prepared nurses with almost 4% in 2003 and almost 8% in 2010.

## Highest Nursing Education

Highest nursing education is an NDB derived variable. On their annual registration forms, nurses are asked to identify other nursing education programs that they have completed. To determine highest nursing education, CIHI compares those other nursing education programs that involved obtaining a university degree with the education received for entry-to-practice. This variable is applicable for RNs, NPs and RPNs. It is not relevant for LPNs whose initial and highest education is identical in the NDB. Counts of nurses by highest levels of nursing education achieved may be found in Appendix 13.

## RNs

The increasing demand for baccalaureate-prepared RNs, as initial entry-to-practice education, over the past decade has had a direct impact on the proportions of nurses with education levels higher than a nursing diploma.

Figure 32<sup>9</sup> highlights the overall increasing levels of education achieved by RNs in Canada. With respect to their highest levels of nursing education, 70% of urban RNs had achieved a diploma in nursing in 2003 but this dropped to around 57% by 2010. During this time period, the proportion of RNs with baccalaureate credentials rose from 27% to almost 40%.

Although relatively small in absolute numbers, given the total size of the RN workforce, the proportion of urban RNs who had gained either a Master's degree or a doctorate in nursing almost doubled between 2003 and 2010. This change was influenced by the increase in higher levels of education attained by NPs (Figure 33). NPs were not the sole source of the increase in masters and doctorates. In 2003 there were 227 RNs with a doctoral degrees in nursing, increasing to 567 in 2010. Only 20 of those doctorates in 2010 were accounted for by NPs.

Rural RNs also changed their patterns of achieving higher levels of nursing education (Figure 32). In 2003, overall in rural Canada, 77% of RNs had a diploma as highest level of education, decreasing to around 66% in 2010. Accompanying that change was an increase from 22% to almost 33% in baccalaureate degree attainment from 2003 to 2010, respectively. This increase in attainment of higher levels of education in nursing was also evident in NPs working in rural Canada (Figure 33). Although the number of rural RNs with doctorates remains small (12 in 2003 and less than 20, a suppressed cell, in 2010) and has not changed substantially, the number of RNs in these areas of the country with Master's degrees has more than doubled (184 in 2003, 444 in 2010).

Figure 32

Proportion (%) of RNs by Highest Nursing Education Categories, Canada 2003 and 2010

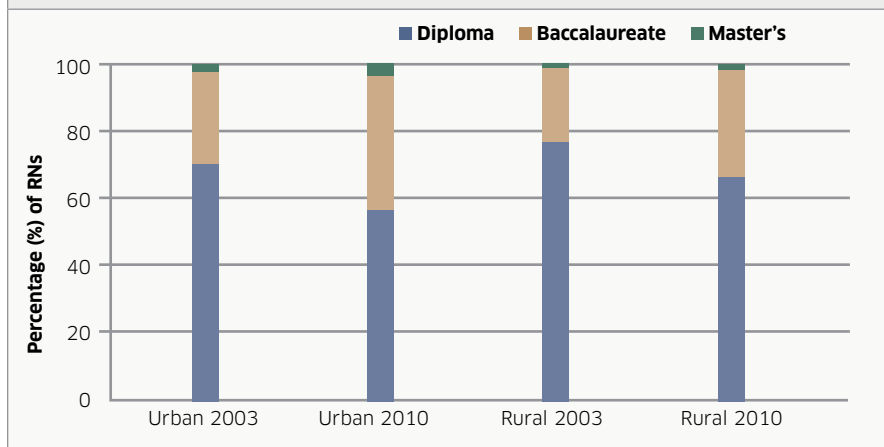
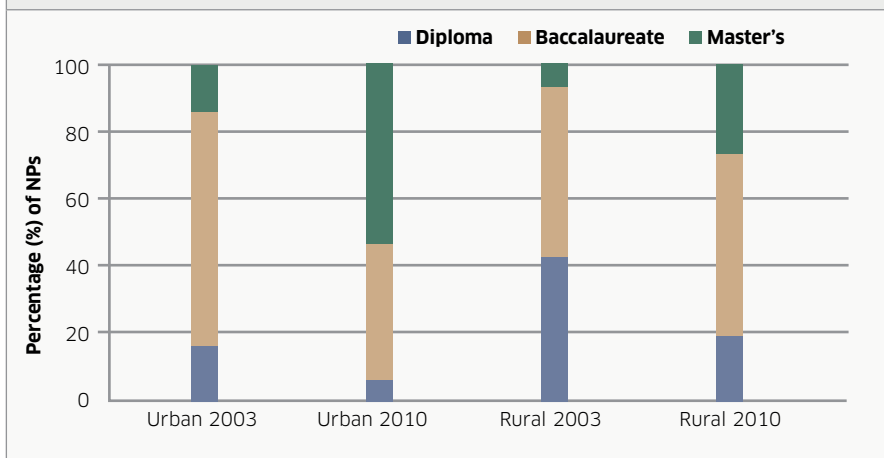


Figure 33

Proportion (%) of NPs by Highest Education Categories, Canada 2003 and 2010



## RPNs

Higher levels of nursing education after entry-to-practice education have not been achieved by large numbers of RPNs. However, during this 2003-2010 period of time, there were some increases in the proportions of RPNs who attained baccalaureate degrees in both urban and rural areas of western Canada. The proportion of urban RPNs with baccalaureate nursing degrees increased from 6% in 2003 to 11% in 2010. An even larger relative increase occurred in rural areas where the proportion of RPNs with baccalaureate nursing education rose from 2% to almost 10% in 2003 and 2010, respectively. One percent or fewer of urban or rural RPNs had attained a Master's level nursing education in either of the two

<sup>9</sup> Figure 32 does not include Quebec RNs. Due to cell suppression, Figures 32 and 33 do not include RNs with doctoral degrees as their highest education in nursing.

Figure 34

Proportion (%) of RPNs by Highest Nursing Education Categories, Canada 2003 and 2010

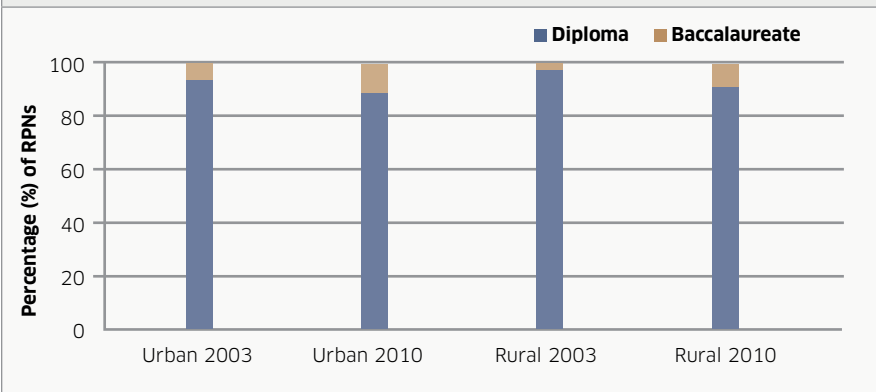


Figure 35

Distribution (%) of RNs by Years (Grouped) Since Initial Entry-to-Practice Nursing Education, 2003

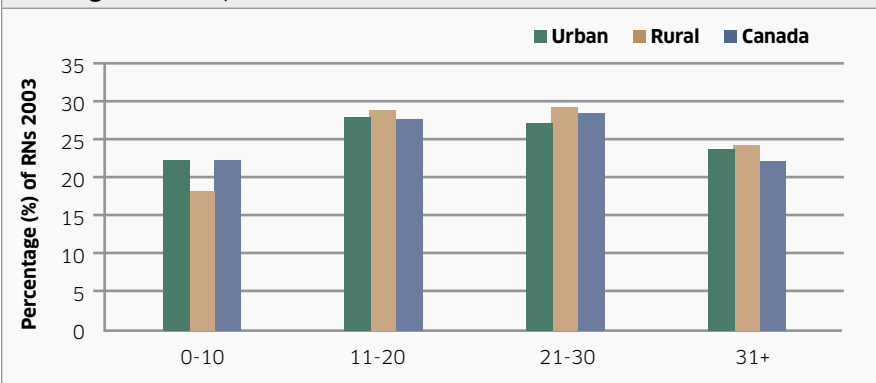
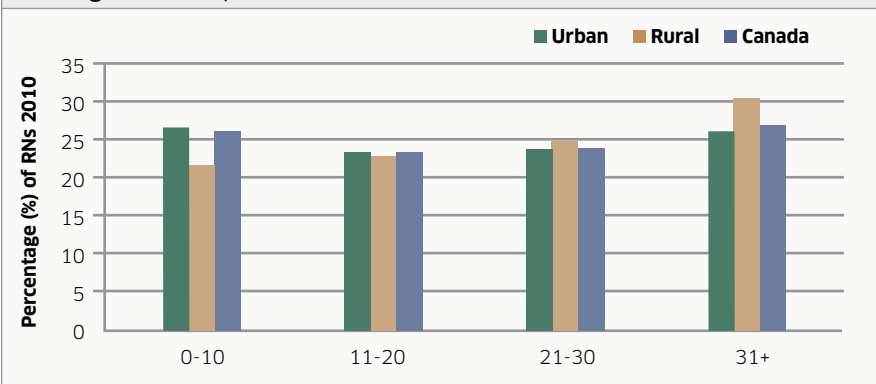


Figure 36

Distribution (%) of RNs by Years (Grouped) Since Initial Entry-to-Practice Nursing Education, 2010



NDB data years examined in this report. Less than 10 urban RPNs had doctorates in either 2003 or 2010. Between 2003 and 2010, rural areas of western Canada lost all (less than 10) of their RPNs with doctorate level education.

### Years Since Graduation

Years since graduation is a derived measure computed by CIHI using the relevant, current NDB data year and the year that a nurse indicated when he/she completed his/her initial nursing education, i.e. entry-to-practice education. It is a rough measure that generally identifies

the number of years that a nurse has been in the workforce. It should be noted, however, that many nurses will not have worked for the full time period represented by years since graduation. Many will have been out of the workforce for various periods of time because of illness, pregnancy and child rearing, etc. Nonetheless, the measure does provide a useful gauge of length of nursing experience. The average numbers of years since initial entry-to-practice education for the regulated nursing workforce of Canada can be found in Appendix 14 for both the 2003 and 2010 NDB data years.

### RNs

In 2003, the mean number of years since graduation for urban RNs ranged from just under 18 years in Newfoundland and Labrador to 21 years in provinces such as Prince Edward Island and Nova Scotia. Those averages increased to 19 years in Quebec and 22 years in Ontario by 2010. For rural RNs, the ranges were as follows: for 2003, 17 years in Newfoundland and Labrador to 23 years in Nova Scotia and Saskatchewan; and for 2010, 19 years for Newfoundland and Labrador to 24 years in Saskatchewan. Overall, there was very little difference in the national averages of years since graduation as in both years urban RNs had a mean of almost 21 years and rural RNs a mean of almost 22 years.

As suggested in the previous paragraph and in Appendix 14, there appears to be very little variation in the statistics for the years since graduation variable. However, Figures 35 and 36 tell a different story. These diagrams provide a summary description of the frequency distribution of the years since graduation variable by subdividing it into groups of years. In 2003 (Figure 35), there was a “normal” distribution with lower percentages in both the 0 to 10 and 31+ grouped years since graduation. In 2010 the distribution (Figure 36) flattened and had almost become inverted with the higher percentages in those 0 to 10 and 31+ grouped years since graduation. Among other things, this suggests that between 2003 and 2010 (and likely continuing) two



Figure 37

Distribution (%) of NPs by Years (Grouped) Since Initial Entry-to-Practice Nursing Education, 2003

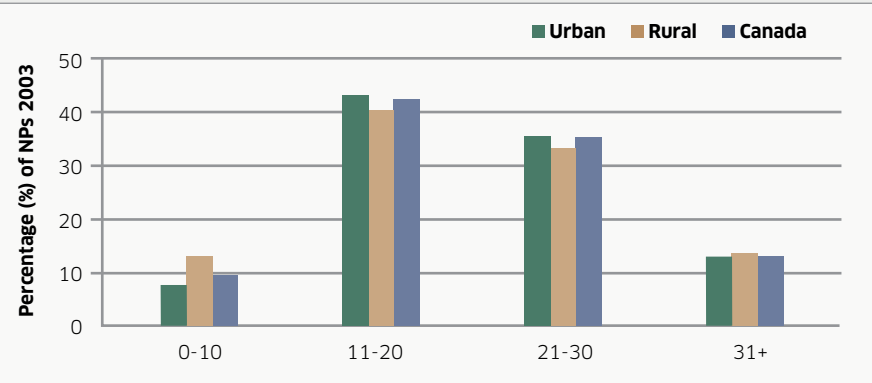


Figure 38

Distribution (%) of NPs by Years (Grouped) Since Initial Entry-to-Practice Nursing Education, 2010

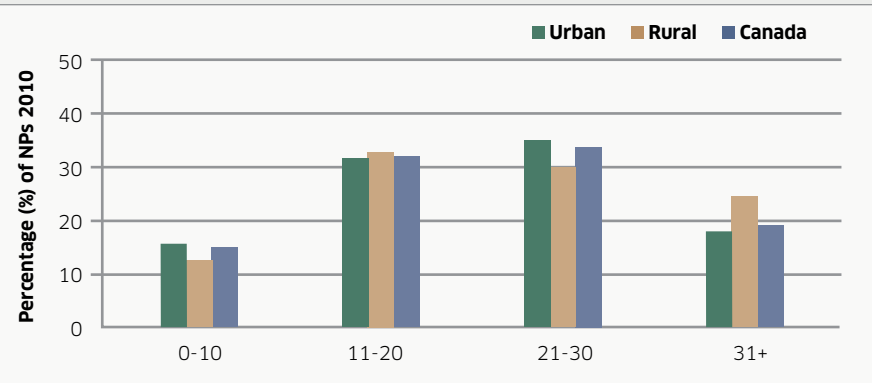
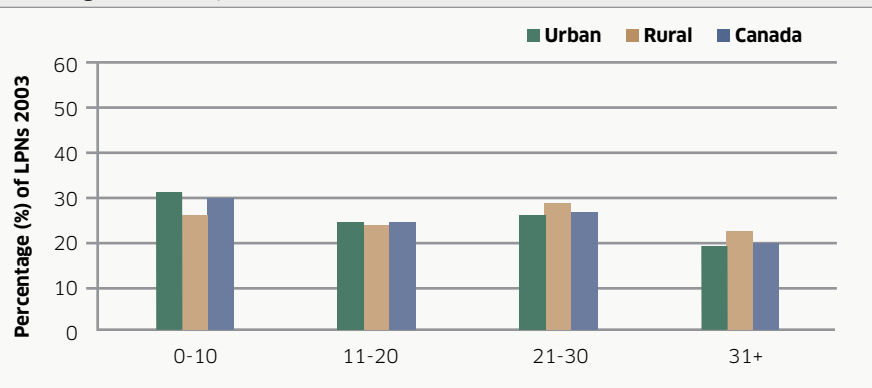


Figure 39

Distribution (%) of LPNs by Years (Grouped) Since Initial Entry-to-Practice Nursing Education, 2003



things have happened: a push to recruit new RNs into the workforce, with more success in urban Canada than rural; and, an effort to keep experienced RNs in the workforce, with more success in rural Canada.

Almost equivalent data and graphical information are provided for NPs in

Appendix 14 and Figures 37 and 38. It is likely that the “normal” distributions in both Figure 37 (for 2003) and Figure 38 (for 2010) convey the correct impressions for this NDB computed database element. However, these and the numbers in Appendix 14 must be used with caution. For NPs, some jurisdictions supplied year of graduation for actual initial

entry-to-practice education while others supplied year of graduation when an NP attained her/his NP qualifications (see the methods in Chapter 5 of the CIHI 2012a publication for details).

**LPNs**

As indicated elsewhere in this report, successful recruitment of LPNs has occurred over the period from 2003 to 2010. This is reflected in the data found in Appendix 14 and the very different (compared with RNs) distribution patterns shown in Figures 39 and 40.

In Canada overall, the average number of years since initial nursing graduation for urban LPNs was just under 18 years in 2003. This decreased to about 15 years in 2010. For rural LPNs, the means were 20 years and 18 years for 2003 and 2010, respectively. Similar types of decreases occurred for both urban and rural LPNs in most provinces and territories.

The resulting decrease in overall average years of experience are further highlighted in Figures 39 and 40 where the older year groups, even beginning with the 11 to 20 year group, became proportionally smaller from 2003 to 2010. Successful recruiting is clearly evident, especially in Figure 40 with the spike in the proportions of both urban and rural LPNs with 10 or fewer years of experience. These data might also suggest a failure to retain older LPNs, especially in urban Canada, or that a relatively high proportion of LPNs entered the profession at an older age.

**RPNs**

RPNs, along with RNs, have on average, the greatest number of years of experience. For RPNs there was an increase of approximately 1 year in urban areas of western Canada and approximately 2 years in rural areas in the mean number of years between the date of attaining initial entry-to-practice nursing education and the respective current NDB data years 2003 and 2010. Provincially, in 2003 the mean for urban RPNs was 19.5 years in British Columbia and 21.4 years in Alberta. For the 2010 data year

Figure 40

Distribution (%) of LPNs by Years (Grouped) Since Initial Entry-to-Practice Nursing Education, 2010

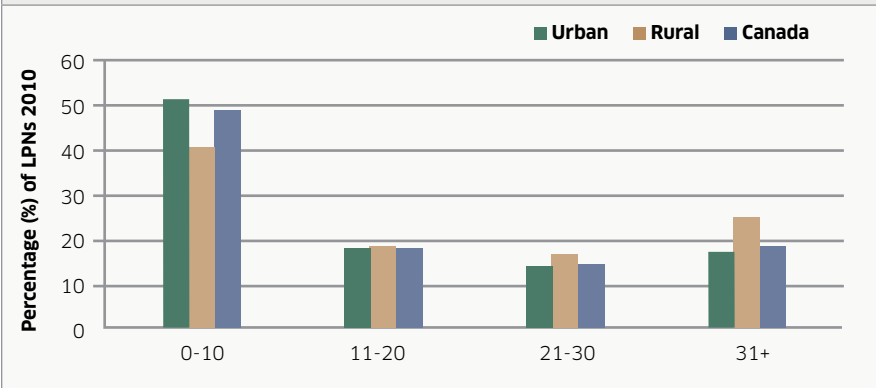


Figure 41

Distribution (%) of RPNs by Years (Grouped) Since Initial Entry-to-Practice Nursing Education, 2003

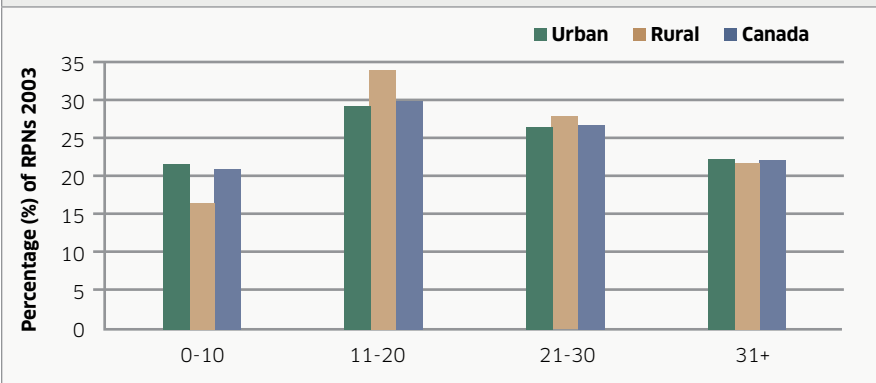
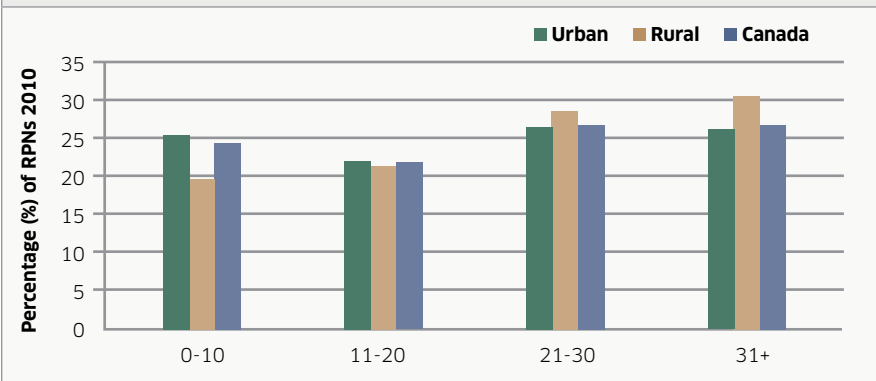


Figure 42

Distribution (%) of RPNs by Years (Grouped) Since Initial Entry-to-Practice Nursing Education, 2010



the range for urban RPNs was from 19.4 years in British Columbia to 25.4 years in Saskatchewan. The average number of years since graduation for rural RPNs ranged from just under 19 years in Alberta to just over 23 years in British Columbia. By 2010 this range for rural RPNs was from 21 years in Alberta to almost 26 years in Saskatchewan.

These overall increases in average years of experience for RPNs are highlighted graphically in Figure 41 for 2003 and Figure 42 for 2010. From 2003 to 2010, the first two groups (10 years and less and 11 to 20 years) decreased for both urban and rural RPNs. This was especially the case for the 11 to 20 year group. Although the 0 to 10 year group percent-

ages in both 2003 and 2010 suggest that some renewal of the RPN workforce is occurring, it is not compensating for the RPNs who are working longer and increasing the proportions of nurses with greater years of experience.

### Other Education

This section deals with educational attainment by members of the nursing workforce of Canada in academic areas other than nursing. Using the data from CIHI NDB obtained for this report, one cannot determine the specific non-nursing topics of that additional schooling. Nor can one determine when that schooling occurred, i.e. before or after attaining initial entry-to-practice nursing credentials. However, one can identify the overall levels of this educational attainment.

The categories of responses for this NDB data element (other education – not nursing) are: Diploma, Baccalaureate, Master’s, Doctorate, None and Not Stated. Because the majority of nurses responded with the latter two categories, these groups are included in the computations of percentages described below. Also, because of the large proportions of responses in these latter two categories, the tables in this section of the report enumerate the actual counts of nurses for this NDB data element.

### RNs

With respect to education other than in the field or subject of nursing, Table 10 provides the counts of the responses of RNs in 2003 and 2010. In terms of geographical location, the majority of the Not Identified RNs for 2003 worked in Quebec.

In 2003 just over 9,300 or about 6% of RNs identified as working in urban Canada had attained a non-nursing bachelor’s degree. This number almost doubled by 2010 or almost 8% of urban RNs. A much smaller percentage (just over 3%) of rural RNs had obtained a non-nursing bachelor’s degree in 2003. However, the 2003 percentages must be treated with caution given that Quebec

nurses for that NDB data year had not been allocated to urban or rural areas of the country. In 2010, slightly over 5% of rural RNs or close to 1,500 RNs, including Quebec nurses, had earned non-nursing bachelor's degrees. Interestingly, the total number of RNs with non-nursing bachelor's decreased from 2003 to 2010. That may be because more of these nurses had subsequently garnered Master's or doctoral degrees as the numbers for each of these educational levels increased during that period of time. Unfortunately, it may also reflect the large number of Not Stated responses as well.

In spite of the absolute increases in the achievement of postgraduate degrees (Master's and doctorates), there was effectively no proportional change from 2003 to 2010. For all RNs in both of these NDB data years, 2.5% had gained Master's degrees and significantly less than 1% had gained non-nursing doctoral degrees. The majority of these postgraduate were earned by urban RNs.

In comparison with RNs overall, larger proportions of NPs had earned non-nursing degrees. With the exception of doctoral-level degrees (none) for rural NPs, the latter statement was a characteristic of both NDB years, both urban and rural NPs and at each of the educational levels included in Table 11.

### LPNs

The numbers and proportions of LPNs with non-nursing diplomas increased from 2003 to 2010 in total and in both urban and rural areas of the country. For rural LPNs, for example, the proportions increased from about 8% in 2003 to a little over 12% in 2010.

Striking increases in the absolute numbers of LPNs who earned non-nursing university degrees can be seen in Table 12. However, these numbers still represent a very small fraction of the LPN workforce in Canada. For example in 2003, between 80 and 89 (a suppressed cell) rural LPNs had a non-nursing bach-

elor's degree, increasing to 117 in 2010. In both years, however, they both represented less than 1% of the rural LPN workforce in those NDB data years.

### RPNS

As indicated in Table 13, there were also significant 2003 to 2010 increases in the absolute numbers of RPNS with non-nursing educational achievements. In the majority of cases these non-nursing levels of education were earned by urban RPNS.

Generally, these absolute numbers still represent relatively small fractions of the overall RPN workforce. For rural RPNS in 2010, for example, 3.5%, 9.0% and 1.5% earned non-nursing diplomas, baccalaureate degrees and Master's degrees, respectively. This compares with the 2003 achievements of 3.8%, 6.7% and 0.8%, respectively. On the other hand, in 2003 there was at least one (again, a suppressed cell which could have ranged from 1 to 9 individuals) rural RPN with

**Table 10**

**Counts of RNs by Non-nursing Levels of Education, Canada 2003 and 2010**

Non-nursing Levels of Education	2003				2010			
	Urban	Rural	Not Identified	Total	Urban	Rural	Not Identified	Total
Baccalaureate	9,311	783	10,788	20,882	18,290	1,486	37	19,813
Master's	3,696	276	2,112	6,084	6,174	437	25	6,636
Doctorate	410	15	97	522	653	26	5	684
None	136,049	20,117	294	156,460	113,487	16,482	691	130,660
Not Stated	5,885	2,047	49,535	57,467	100,351	10,368	0	110,719
Total	155,351	23,238	62,826	241,415	238,955	28,799	758	268,512

Note: Quebec RNs were not allocated to urban or rural areas of the country in the 2003 NDB.

**Table 11**

**Counts of NPs by Non-nursing Levels of Education, Canada 2003 and 2010**

Non-nursing Levels of Education	2003				2010			
	Urban	Rural	Not Identified	Total	Urban	Rural	Not Identified	Total
Baccalaureate	58	18	0	76	250	44	0	294
Master's	37	5	0	42	141	21	0	162
Doctorate	†	0	0	†	8	0	1	9
None	375	152	3	530	811	205	9	1,025
Not Stated	†	1	0	†	774	222	0	996
Total	477	176	3	656	1,984	492	10	2,486

Note: † digit suppressed in conformance with CIHI privacy and confidentiality policy.

a non-nursing doctorate. In 2010 there were none.

## Summary

The majority of RNs entered nursing practice with a diploma in nursing. However, that is changing now with the proportions of RNs who reported that they entered nursing practice with a diploma decreasing in every jurisdiction between 2003 and 2010. By 2010, for example, only 79% of rural RNs indicated that they had entered nursing practice with a diploma as their initial entry-to-practice nursing education. Baccalaureate and higher university degrees also increased for RPNs as entry-to-practice qualifications. On the other hand, the proportion of LPNs entering nursing practice with a diploma increased to about 99% in rural areas.

The attainment of baccalaureate and higher nursing credentials increased

for RNs from 2003 to 2010. Between 2003 and 2010, the proportion of RNs who gained either a Master's degree or a doctorate in nursing almost doubled for urban RNs and the number of rural RNs with Master's degrees more than doubled. Higher levels of nursing education after entry-to-practice education had not been achieved by large numbers of RPNs.

There was very little difference in the national averages of years since graduation in 2003 and 2010 for RNs. Urban RNs had a mean of almost 21 years and rural RNs a mean of almost 22 years. On the other hand, there were significant 2003 to 2010 decreases in the mean number of years since graduation for LPNs. This was especially the case for urban LPNs where the mean decreased from about 18 years to 15 years. The decrease was less for rural LPNs, from 20 years to 18 years on average for 2003 and 2010,

respectively. RPNs, along with RNs, have on average, the greatest number of years of experience. Between 2003 and 2010 there was an increase of approximately 1 year in the average number of years of experience for urban RPNs and approximately 2 years for rural RPNs.

Other than NPs, only a small fraction of the RN workforce in Canada has attained non-nursing university degrees. However, even though the proportions remained small they did increase from 2003 to 2010. For example for rural RNs, 3% in 2003 (excluding Quebec) and slightly over 5% in 2010 (including Quebec) had earned a baccalaureate degree in a non-nursing subject. In comparison with RNs overall, larger proportions of NPs had earned non-nursing degrees. Although relatively small, overall the numbers and proportions of LPNs and RPNs with non-nursing educational achievements increased from 2003 to 2010.

**Table 12**

### Counts of LPNs by Non-Nursing Levels of Education, Canada 2003 and 2010

Non-nursing Levels of Education	2003				2010			
	Urban	Rural	Not Identified	Total	Urban	Rural	Not Identified	Total
Diploma	6,143	1,053	0	7,196	12,638	1,765	0	14,403
Baccalaureate	782	8†	†	872	1,727	117	0	1,844
Master's	6†	†	0	73	370	32	0	402
Doctorate	9	0	0	9	3†	†	0	36
None	13,616	5,235	10	18,861	20,070	6,350	2	26,422
Not Stated	2907†	702†	30	36,127	3219†	592†	0	38,117
Total	49,693	1340†	4†	63,138	67,032	14,190	2	81,224

Note: † digit suppressed in conformance with CIHI privacy and confidentiality policy.

**Table 13**

### Counts of RPNs by Non-Nursing Levels of Education, Canada 2003 and 2010

Non-nursing Levels of Education	2003				2010			
	Urban	Rural	Not Identified	Total	Urban	Rural	Not Identified	Total
Diploma	88	34	0	122	379	30	0	409
Baccalaureate	226	59	0	285	397	76	0	473
Master's	40	7	0	47	129	13	0	142
Doctorate	†	†	0	4	16	0	0	16
None	12	6	0	18	2,037	189	0	2,226
Not Stated	383†	77†	14	4,632	1,367	540	1	1,908
Total	4,208	886	14	5,108	4,325	848	1	5,174

Note: † digit suppressed in conformance with CIHI privacy and confidentiality policy.

# Chapter 6

## Migration Characteristics



### Methodological Notes

As a complement to the question on type of initial nursing education, nurses are asked where this entry-to-practice education was obtained: a Canadian province/territory or country other than Canada. Those nurses responding to the latter category are considered to be international nursing graduates (INGs). In this chapter, counts and proportions of INGs in the regulated nursing workforce are examined for urban and rural areas of provinces, territories and for Canada as a whole. As well, the principal source countries for these INGs are identified.

There is insufficient personal information in the NDB to reliably determine the mobility of nurses in terms of intraprovincial (movements from one location to another in the same province or territory) or interprovincial (movements from one province or territory to another) migration. At least that is the case in

the traditional sense of intraprovincial or interprovincial migration. As well, nurses in Canada do not have registration identifiers that are unique across the country that would allow for detailed mobility analyses. Only a sense of interprovincial migration can be assessed and only for Canadian educated nurses. This is determined by comparing the jurisdiction (province/territory) where a nurse received her/his initial nursing education with the jurisdiction (province/territory) of current (i.e. by specific NDB data year) registration.

Using the methodology just outlined, this report identifies the proportions of nurses who were retained (i.e. currently registered in the same jurisdiction as she/he received her/his entry-to-practice education). For those nurses who did migrate, the primary destinations of these “migrants” have been determined. The presentation of these destinations

has been undertaken for both urban and rural nurses (RNs, LPNs and RPNs).

### International Nursing Graduates (INGs)

Counts of the nurses whose initial entry-to-practice education was attained in a Canadian institution or out of the country (INGs) may be found in Appendix 15. These counts are provided for all Canadian jurisdictions and nursing groups for 2003 and 2010.

#### RNs

In 2003 (Figure 43) in urban Canada overall, 10% of RNs were INGs. Provincially, the proportions for urban RNs ranged from just over 1% in Newfoundland and Labrador and New Brunswick to almost 16% in British Columbia. The percentage of ING urban RNs dipped slightly to about 9% in 2010, with still the same approximate provincial range of about 1% in Newfoundland and Labra-

Figure 43

Proportion (%) of Urban RNs who were ING by Province/Territory and Canada, 2003 and 2010

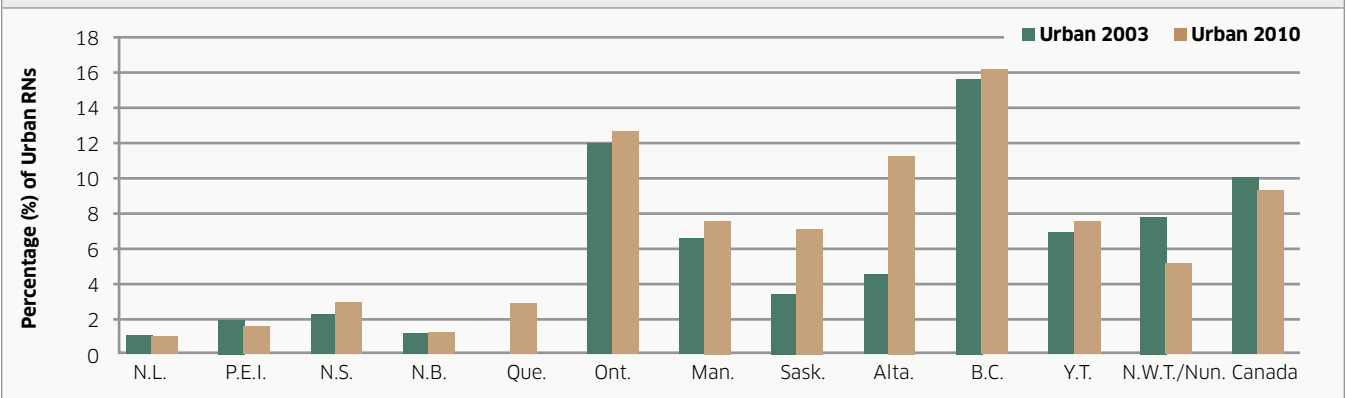
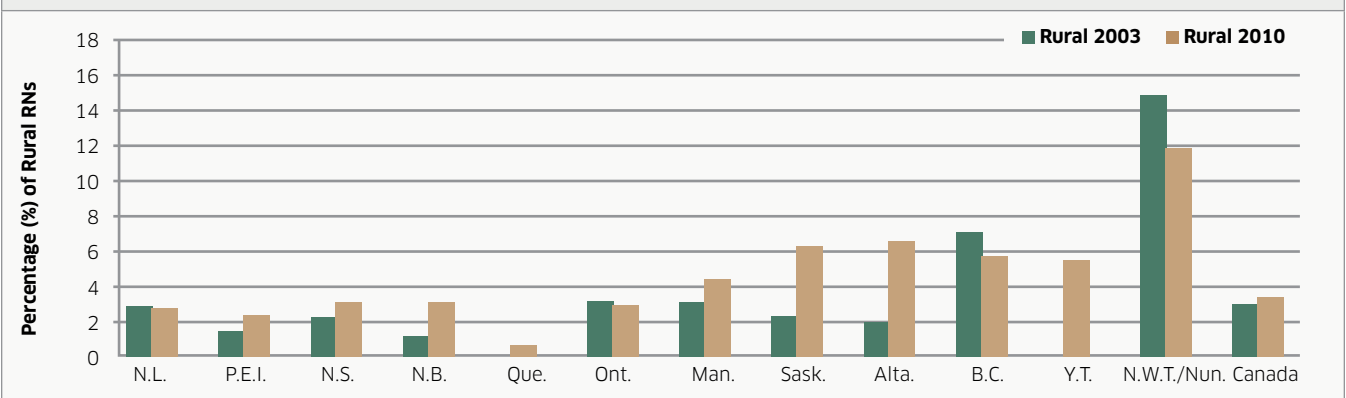


Figure 44

Proportion (%) of Rural RNs who were ING by Province/Territory and Canada, 2003 and 2010



dor and New Brunswick to 16% again in British Columbia.

Figure 44, when compared with Figure 43, shows that the proportion of rural RNs who were ING in Canada was much smaller than in urban areas of the country. This was the case in both 2003 and 2010. In rural Canada the proportions were just over 3% compared with the approximately 10% for urban Canada. Figure 44 also shows the relatively large increase in ING proportions over the 2003-2010 period in both Saskatchewan and Alberta.

A total of 114 countries could be counted as origins (or at least the countries where the RNs obtained their initial nursing education) of Canada's urban RN ING (Appendix 16). This number increased to 152 in 2010. The primary origin countries in 2003 were the Philippines (almost 29%) and the United Kingdom (24%).

The same two countries dominated the ING origin locations for urban RNs in 2010: Philippines (32.9%) and the United Kingdom (15.8%). No other contributing country exceeded 7% of RN ING in urban Canada in either 2003 or 2010.

In 2003 there were 33 countries of origin for Canada's rural ING RNs and this increased to 39 in 2010. Note that the number of country origins increases between 2003 and 2010 for both urban and rural RN ING and there are larger numbers of origin countries represented in urban compared with rural areas of the country. This pattern is common to all of the regulated nursing groups of Canada. For rural RNs in Canada, the primary origin countries were as follows: in 2003 - United Kingdom (almost 35%), United States (22%) and the Philippines (14%); and, in 2010 - United Kingdom (27%), United States (22%) and the Philippines (21%).

NPs whose initial entry-to-practice education was received outside of Canada most likely came from the United States or the United Kingdom (Appendix 17). However, only 5% of urban NPs were ING (in either 2003 or 2010) and only 2 to 3% were ING in rural Canada. See cautionary note with respect to NPs and initial nursing education provided earlier.

#### LPNs

No graphical illustrations are provided of the LPN ING because their proportions are very small for both 2003 and 2010.

In Canada, overall, just under 3% of urban LPNs were ING with provincial percentages ranging from 2 to 3% in Manitoba, Saskatchewan and Alberta to almost 4% in Ontario. By 2010 with about the same national percentage, the provincial range was zero to less than 1% in most provinces but as high as 5% in Ontario and Manitoba and just over 8% in Alberta. The principal origin

Figure 45

Proportion (%) of Urban RPNs who were INGs by Province and Canada, 2003 and 2010

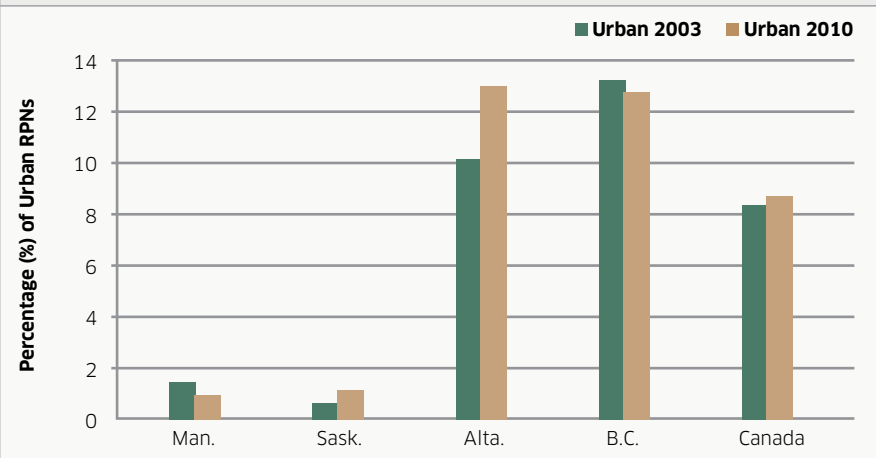
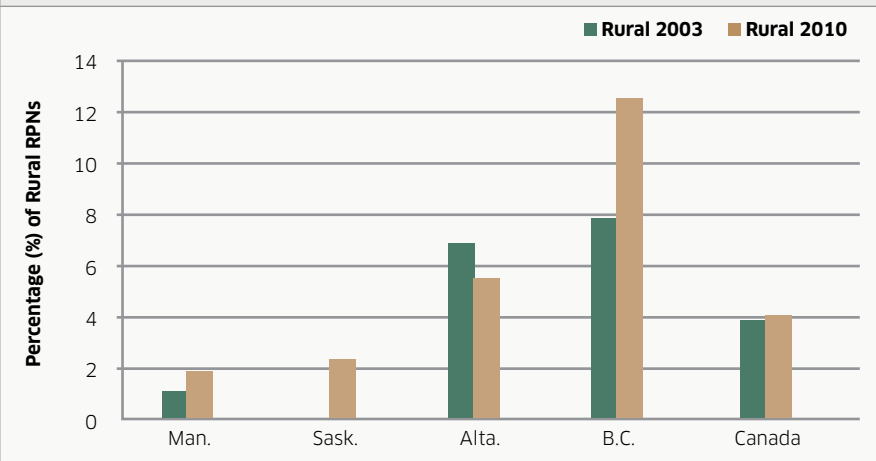


Figure 46

Proportion (%) of Rural RPNs who were INGs by Province and Canada, 2003 and 2010



countries for these urban LPN INGs were (Appendix 18) as follows: in 2003 – the United Kingdom (45%), the Philippines (12%) and the United States (just over 7%) from a total of 69 countries; and, in 2010 – the Philippines (36%), United Kingdom (16%) and United States (9%) from a total of 106 countries.

In rural Canada the LPNs who had obtained their initial nursing education came from only 6 countries in 2003 and 16 countries in 2010. The principal origin countries were once again United States, United Kingdom and the Philippines. Percentages for these countries in 2010 were as follows: almost 38%, 19% and almost 13%, for the United States, United Kingdom and Philippines, respec-

tively. Overall in rural Canada, in both 2003 and 2010, less than 1% of LPNs were INGs.

**RPNs**

Figures 45 and 46 highlight the quite different provincial patterns with respect to proportions of RPNs whose initial entry-to-practice nursing education was attained outside Canada. For both urban and rural RPNs, percentages of INGs are relatively low for Manitoba and Saskatchewan compared with the much higher percentages in Alberta and British Columbia in 2003. Although somewhat less striking because of the relative decrease in RPN INGs in Alberta, this same pattern is repeated in 2010. Overall, in both urban and rural western Canada, 8

to 9% of RPNs were INGs, decreasing to about 4% in 2010.

The number of countries of origin for RPN INGs was very small in both of the NDB data years examined here: for urban RPNs – 7 countries in 2003 and 14 countries in 2010; and only 6 for rural RPNs in either 2003 or 2010. In all combinations, (derived from urban-rural and 2003-2010), over 80% of RPN INGs came from the United Kingdom. In both years in urban areas of western Canada, the next most frequent country origins, in order, were Hong Kong and Australia. These two country origins of RPNs were also the next most frequent for rural RPNs in 2003. In 2010 again, most rural RPN INGs came from the United Kingdom, followed by Nigeria and the Republic of Ireland.

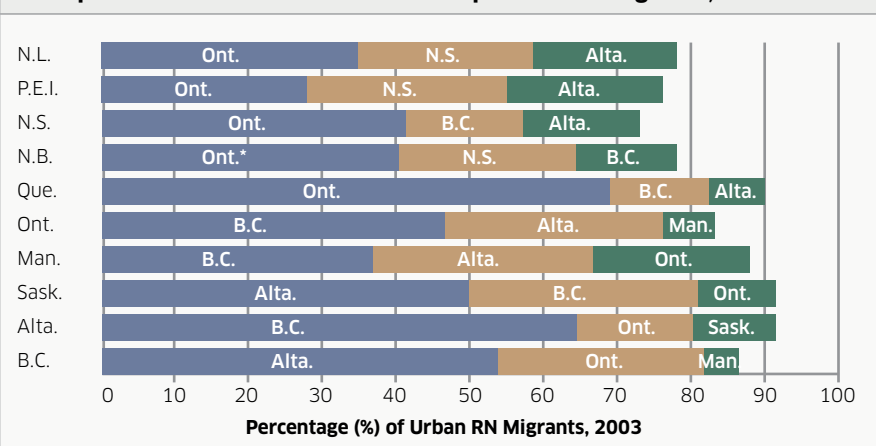
**Interprovincial Migration**

In this section of the report, Canadian-educated nurses who were working in a jurisdiction other than the one in which they had received their initial entry-to-practice nursing education are referred to as “migrants.” Appendix 20 identifies, for both the 2003 and 2010 NDB data years, the proportions of non-migrants. These nurses were located in the same jurisdiction in which they had received their entry-to-practice nursing education. The primary destinations (up to three) of the “migrant” nurses are illustrated graphically below.

It must be noted that this form of migration analysis may not be interpreted as yielding annual migration rates. The information available in the NDB is insufficient to provide such rates. In the interval between receiving her/his initial nursing education and locating in her/his current jurisdiction, a nurse may have moved from one province/territory to another several times. In addition, as noted earlier, nurses do not have unique identifiers in Canada. That prohibits analyses of intraprovincial mobility patterns, such as rural-to-urban or urban-to-rural movements within the same jurisdiction.<sup>10</sup>

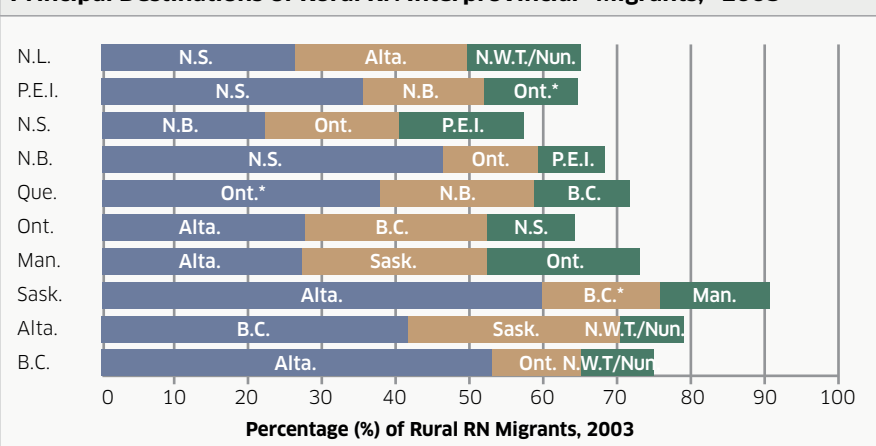
**Figure 47**

**Principal Destinations of Urban RN Interprovincial “Migrants,” 2003**



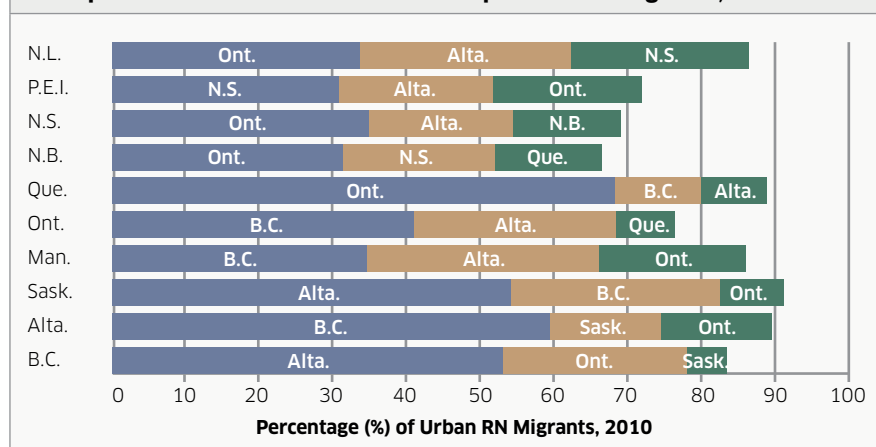
**Figure 48**

**Principal Destinations of Rural RN Interprovincial “Migrants,” 2003**



**Figure 49**

**Principal Destinations of Urban RN Interprovincial “Migrants,” 2010**



For the most part, all of the illustrations below conform to the interprovincial migration patterns of the general population. That is, migrants primarily move to either neighbouring jurisdictions or to “magnet” jurisdictions, i.e. those with larger populations such as Ontario, British Columbia and Alberta.

**RNs**

Excluding Canadian-educated RNs who did not identify their jurisdictions of current (in the respective NDB data year) practice and/or initial nursing education, approximately 24,000 urban RNs in 2003 had moved to a jurisdiction other than where they had received their initial entry-to-practice nursing education. In that same year, 4,000 rural RNs had moved. In 2010, the numbers of inter-jurisdictional migrants included approximately 25,000 urban RNs and 4,000 rural RNs.

Figure 47 and Figure 48 identify the primary destinations of migrant RNs who were located in urban and rural areas of the country in 2003. Similarly, Figure 49 and Figure 50 identify the primary destinations in 2010 for urban and rural RNs, respectively. In constructing these diagrams using the NDB, a number of the counts were suppressed by CIHI when the data were released for this study. Even so, estimates could be made for a number of the destinations. An example of how to interpret these diagrams is provided below.

In the 2003 NDB, 1,310 RNs who had received their initial nursing education in New Brunswick were practising in an urban area of another jurisdiction. As shown in Figure 47, approximately 40% of those RNs had moved to Ontario, 24% to Nova Scotia and another 14% to British Columbia. In Figure 47, Ontario is shown with an asterisk (Ont.\*) to indicate that the percentage is an estimate. The number for this destination was released as a suppressed number (52†). This particular suppressed number indicates that somewhere between 520 and 529 RNs moved from New Brunswick. Even though the actual number was sup-



pressed a reasonable percentage could be computed.

Similarly in 2003, 232 RNs who had earned their initial entry-to-practice nursing education were practising in a rural area of another jurisdiction. The majority of these nurses had moved to Nova Scotia, Ontario and Prince Edward Island (Figure 48).

Due to the large number of cells that were suppressed in the tables illustrating the migration patterns of NPs, similar destination graphs could not be created. However, approximate absolute numbers can be identified. Of the close to 70 NPs working in urban areas of the country in 2003, approximately 30 had moved to Ontario and about 15 to Alberta. That is, these 45 NPs had received their initial nursing education in a Canadian jurisdiction other than Ontario or Alberta. Of the approximately 50 or so NPs working in rural areas of the country in 2003, just under 20 had chosen Ontario in which to practice and close to 20 had moved to Alberta.

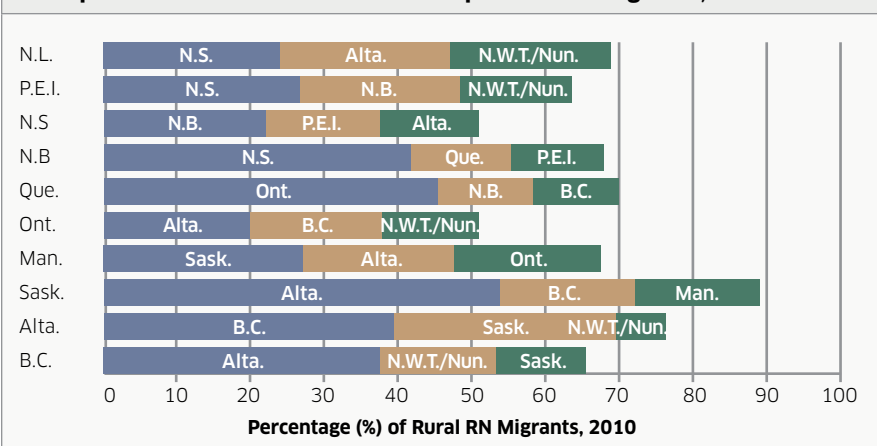
In 2010, Ontario and Alberta were again the principal destinations for both urban and rural NPs. Estimated absolute numbers of migrants for that NDB data year are as follows: for NPs working in urban areas of the country in 2010, of the approximately 300 or so who moved from the jurisdiction in which they had received their initial nursing education, in the neighbourhood of 125 moved to Ontario and just under 80 moved to Alberta; and, for rural NPs, of the approximately 110 migrants, around 30 chose Ontario and another 15 chose Alberta as their principal destination.

### LPNs

In 2003, approximately 3,000 Canadian-educated LPNs were working in urban areas of the country in jurisdictions other than the ones in which they had received their initial entry-to-practice nursing education. In 2010, this group of LPNs had increased to approximately 3,500. Figure 51 identifies the principal destinations for

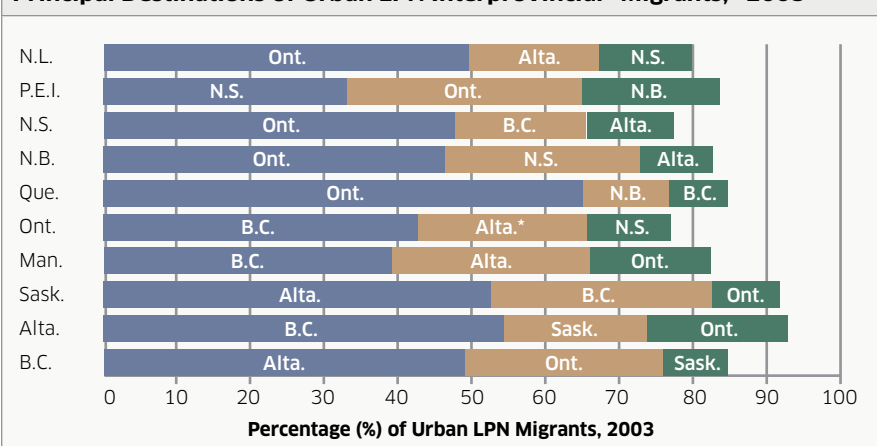
**Figure 50**

### Principal Destinations of Rural RN Interprovincial “Migrants,” 2010



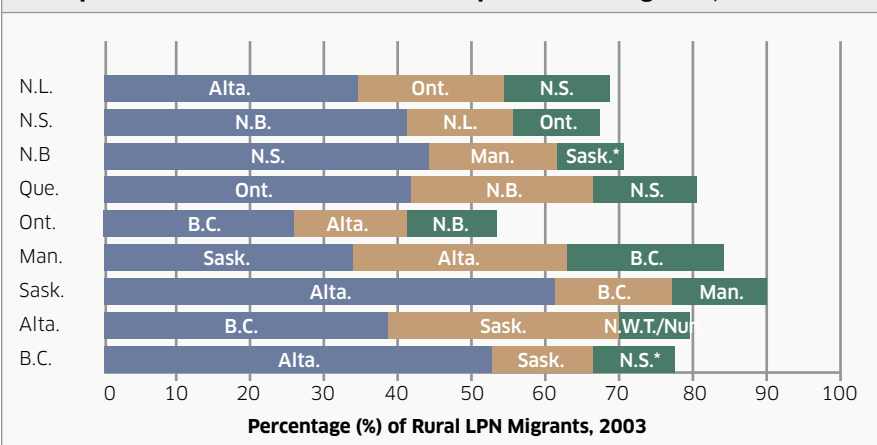
**Figure 51**

### Principal Destinations of Urban LPN Interprovincial “Migrants,” 2003



**Figure 52**

### Principal Destinations of Rural LPN Interprovincial “Migrants,” 2003



urban LPNs in 2003 and Figure 53 for the urban LPN migrants in 2010.

The number of rural LPN migrants also increased from 2003 to 2010. Figure 52 shows the principal destinations in 2003 for the approximately 650 LPNs who moved to a different jurisdiction. Figure 54 provides similar information but for the 900 or so rural LPNs who, in 2010, reported that they were working in jurisdictions that differed from those in which they had received their initial nursing education.

### RPNs

In this chapter, interprovincial migration of nurses is enumerated by comparing jurisdictions of initial entry-to-practice nursing education with jurisdictions of current practice. In that sense of migration, RPNs had become less mobile in 2010 compared with 2003.

In 2003, approximately 600 RPNs who were working in urban areas of western Canada indicated that their current jurisdiction of practice was different from the one in which they had received their initial nursing education. For urban RPNs in 2010 that total had decreased to about 500. The principal destinations for these urban RPNs are illustrated in Figure 55 and Figure 57 for 2003 and 2010, respectively.

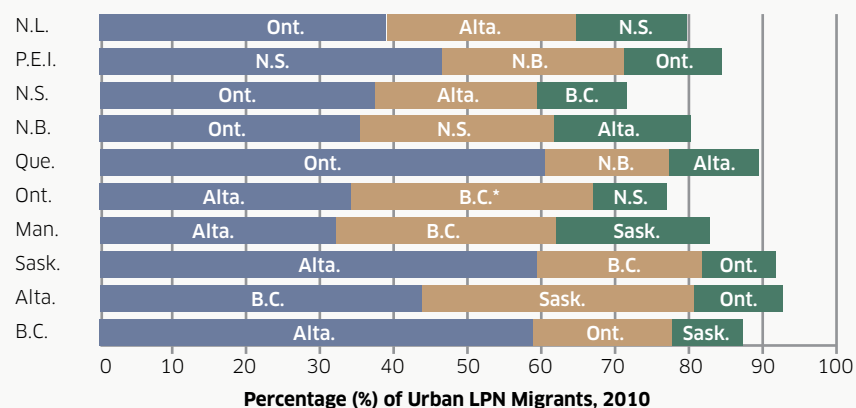
There was also a decrease in the numbers of rural RPN migrants. Figure 56 identifies the primary destinations for the approximately 150 RPNs who were working in rural areas of western Canada who indicated in 2003 that they were no longer in the jurisdiction in which they had received their initial entry-to-practice nursing education. The total number of such migrants, whose principal destinations are shown in Figure 58, decreased to around 100 RPNs in 2010.

### Summary

In urban Canada, the proportion of RN INGs decreased slightly from 10% in 2003 to about 9% in 2010. The proportion of RN INGs was much smaller in rural Canada in both of the NDB data years

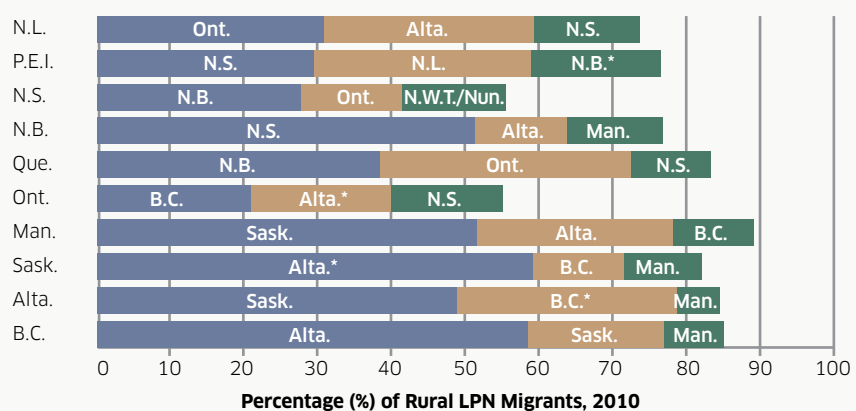
**Figure 53**

#### Principal Destinations of Urban LPN Interprovincial “Migrants,” 2010



**Figure 54**

#### Principal Destinations of Rural LPN Interprovincial “Migrants,” 2010

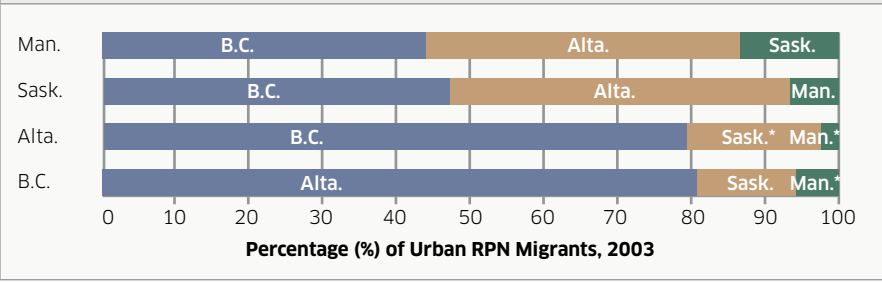


examined in this report. Low proportions of INGs were also characteristic of NPs and LPNs. The proportion of RPNs who were INGs decreased in both rural and urban areas of western Canada from 8 to 9% in 2003 to about 4% in 2010.

As judged by comparing the jurisdiction where a Canadian-educated nurse obtained her/his initial nursing education with current jurisdiction of registration, many nursing groups became less mobile over the period from 2003 to 2010. This was particularly the case for rural RNs and for both urban and rural RPNs. For those nurses who did move, their principal destinations were either a neighbouring province/territory or a “magnet” province such as Ontario, British Columbia or Alberta.

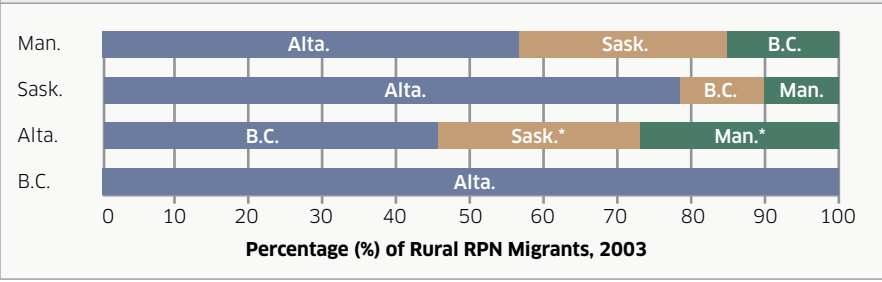
**Figure 55**

**Principal Destinations of Urban RPN Interprovincial "Migrants," 2003**



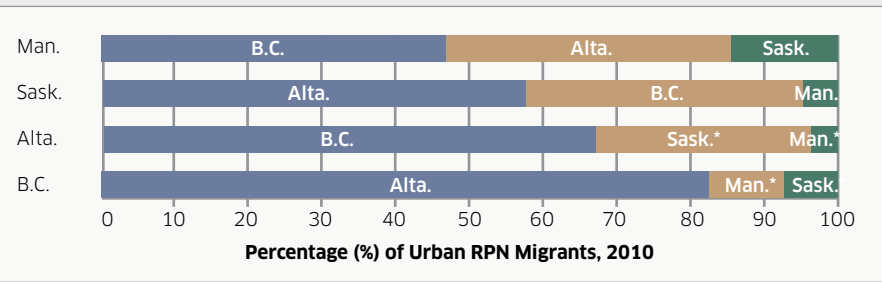
**Figure 56**

**Principal Destinations of Rural RPN Interprovincial "Migrants," 2003**



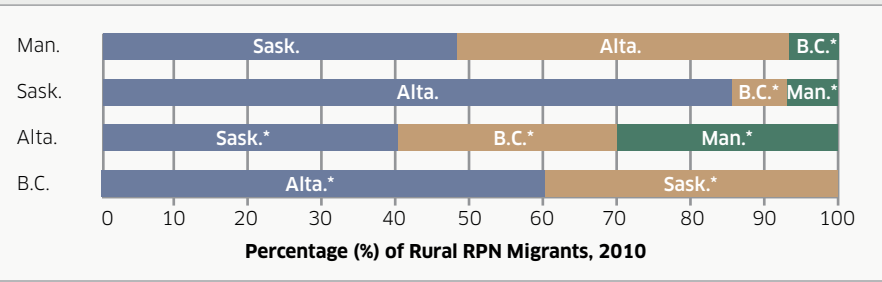
**Figure 57**

**Principal Destinations of Urban RPN Interprovincial "Migrants," 2010**



**Figure 58**

**Principal Destinations of Rural RPN Interprovincial "Migrants," 2010**



## References

- Birch, S. 2002. Health human resource planning for the new millennium: inputs in the production of health, illness and recovery in populations. *Canadian Journal of Nursing Research* 33:109-114.
- Canadian Institute for Health Information (CIHI). 2002. Supply and Distribution of Registered Nurses in Rural and Small Town Canada, 2000. Ottawa: Canadian Institute for Health Information (written by J.R. Pitblado, J. Medves, M. MacLeod, N. Stewart and J. Kulig).
- CIHI. 2003a. Workforce Trends of Licensed Practical Nurses in Canada, 2002. Ottawa: Canadian Institute for Health Information.
- CIHI. 2003b. Workforce Trends of Registered Psychiatric Nurses in Canada, 2002. Ottawa: Canadian Institute for Health Information.
- CIHI. 2007a. Distribution and Internal Migration of Canada's Registered Nurse Workforce. Ottawa: Canadian Institute for Health Information (written by J.R. Pitblado).
- CIHI. 2007b. Distribution and Internal Migration of Canada's LPN Workforce. Ottawa: Canadian Institute for Health Information (written by J.R. Pitblado).
- CIHI. 2008. Regulated Nurses: Trends, 2003 to 2007. Ottawa: Canadian Institute for Health Information.
- CIHI. 2012a. Regulated Nurses: Canadian Trends, 2006 to 2010. Ottawa: Canadian Institute for Health Information.
- CIHI. 2012b. Registered Nurses Data Dictionary and Processing Manual, Version 12.0. Ottawa: Canadian Institute for Health Information.
- CIHI. 2012c. Licensed Practical Nurses Data Dictionary and Processing Manual, Version 11.0. Ottawa: Canadian Institute for Health Information.
- CIHI. 2012d. Registered Psychiatric Nurses Data Dictionary and Processing Manual, Version 10.0. Ottawa: Canadian Institute for Health Information.
- CIHI. 2012e. Regulated Nurses: Canadian Trends, 2007 to 2011. Ottawa: Canadian Institute for Health Information.
- DesMeules, M., Pong, R., Lagacé, C., Heng, D., Manuel, D., Pitblado, R., Bollman, R., Guernsey, J., Kazanjian, A., Koren, I. 2006. How Healthy Are Rural Canadians? An Assessment of Their Health Status and Health Determinants. *Canadian Population Health Initiative*. Ottawa: Canadian Institute for Health Information.
- du Plessis, V., Beshiri, R., Bollman, R.D. and Clemenson, H. 2001. Definitions of rural. *Rural and Small Town Canada Analysis Bulletin* 3:1-16.
- Kulig, J.C., Andrews, M.E., Stewart, N.J., Pitblado, J.R., MacLeod, M.L.P., Bentham, D., D'Arcy, C., Morgan, D., Forbes, D., Remus, G. and Smith, B. 2008. How do registered nurses define rurality? *Australian Journal of Rural Health* 16:28-32.
- Pitblado, J. Roger. 2005. So, what do we mean by "rural," "remote" and "northern"? *Canadian Journal of Nursing Research* 37:163-168.
- Pitblado, J. Roger. 2007. Distribution and Internal Migration of Canada's Registered Nurse Workforce. Ottawa: Canadian Institute for Health Information.
- Pong, Raymond W. and Pitblado, J. Roger. 2005. Geographic Distribution of Physicians in Canada: Beyond How Many and Where. Ottawa: Canadian Institute for Health Information.
- Statistics Canada. 2002. GeoSuite 2001 Census Reference Guide. Catalogue No. 92F-0150-GIE. Ottawa: Minister of Industry.
- Statistics Canada. 2007. GeoSuite, Reference Guide Census Year 2006. Catalogue No. 92-150-GIE. Ottawa: Minister of Industry.
- Statistics Canada. 2011. Postal Code Conversion File (PCCF), Reference Guide. Catalogue No. 92-153-G. Ottawa: Minister of Industry.
- Statistics Canada. 2012. GeoSuite, Reference Guide Census Year 2011. Catalogue No. 92-150-GIE. Ottawa: Minister of Industry.

## List of Appendices

The appendices for the report may be downloaded from the RRN2 website (<http://ruralnursing.unbc.ca/>). A majority of the tables included in the appendices are “raw” counts of the regulated nursing workforce of Canada. The titles for these supplementary tables are listed below:

**Appendix 1.** Number of Nurses in the Regulated Nursing Workforce by Urban/Rural Community Categories, Canada 2003 and 2010.

**Appendix 2.** Number of Nurses in the Regulated Nursing Workforce by Urban/Rural Category, Province/Territory and Canada, 2003 and 2010.

**Appendix 3.** Nurse-to-Population Ratios (number of nurses per 100,000 population) by Jurisdiction, Canada 2003 and 2010.

**Appendix 4.** Female/Male Counts of the Regulated Nursing Workforce by Urban/Rural Location, Province/Territory and Canada, 2003 and 2010.

**Appendix 5.** Average Age (in years) of the Regulated Nursing Workforce by Urban/Rural Location and Province/Territory of Registration, Canada, 2003 and 2010.

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**Appendix 7.** Employment Status Counts for the Regulated Nursing Workforce by Urban/Rural Location, Province/Territory and Canada, 2003 and 2010.

**Appendix 8.** Proportion (%) of the Regulated Nursing Workforce with Multiple Employment Status, 2003 and 2010.

**Appendix 9.** Place of Work Counts for the Regulated Nursing Workforce by Urban/Rural Location, Province/Territory and Canada, 2003 and 2010.

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**Appendix 11.** Counts of the Regulated Nursing Workforce by Primary Responsibility by Urban/Rural Location, Province/Territory, Canada, 2003 and 2010.

**Appendix 12.** Counts of the Regulated Nursing Workforce by Initial Nursing Education by Urban/Rural Location, Province/Territory, Canada, 2003 and 2010.

**Appendix 13.** Counts of the Regulated Nursing Workforce by Highest Nursing Education by Urban/Rural Location, Province/Territory, Canada, 2003 and 2010.

**Appendix 14.** Average Number of Years Since Initial Entry-to-Practice Education of the Regulated Nursing Workforce by Urban/Rural Location, Province/Territory, Canada, 2003 and 2010.

**Appendix 15.** Counts of the Regulated Nursing Workforce by Place of Graduation with Initial Entry-to-Practice Education by Urban/Rural Location, Province/Territory, Canada, 2003 and 2010.

**Appendix 16.** Principal Source Countries of the International Graduates in the Canadian RN Workforce, 2003 and 2010.

**Appendix 17.** Principal Source Countries of the International Graduates in the Canadian NP Workforce, 2003 and 2010.

**Appendix 18.** Principal Source Countries of the International Graduates in the Canadian LPN Workforce, 2003 and 2010.

**Appendix 19.** Principal Source Countries of the International Graduates in the Canadian RPN Workforce, 2003 and 2010.

**Appendix 20.** Non-migrants: Proportion (%) of the Regulated Nursing Workforce Working in the Province/Territory Where They First Graduated with Initial Nursing Education.

# Appendices



## Appendix 1

### Number of Nurses in the Regulated Nursing Workforce by Urban/Rural Community Categories, Canada 2003 and 2010

Urban/Rural Community Categories	RNs		NPs		LPNs		RPNs	
	2003	2010	2003	2010	2003	2010	2003	2010
<b>Urban</b>								
CMA	127,081	196,015	406	1,694	36,627	50,605	2,955	3,119
CA: 50,000 - 999,999	8,688	12,508	25	59	3,062	4,334	218	294
CA: 10,000 - 49,999	19,582	30,432	46	231	10,004	12,093	1,035	912
<b>Rural and Small Town Canada</b>								
Strong MIZ	2,870	2,266	15	50	1,347	1,250	35	16
Moderate MIZ	7,898	9,670	70	171	5,092	5,196	500	496
Weak MIZ	10,960	15,299	75	201	6,410	7,129	316	295
No MIZ	1,164	990	15	38	501	563	26	34
Territories	346	574	†	32	54	52	9	7
<b>Not Stated</b>	62,826	758	†	10	41	2	14	1
<b>TOTAL</b>	241,415	268,512	656	2,486	63,138	81,224	5,108	5,174

† Digit suppressed in accordance with CIHI's privacy policy; digit is from 0 to 9.  
 The majority of the 'Not Stated' 2003 RN counts refer to nurses in Quebec. No urban/rural allocations of Quebec RN NDB records were made in the 2003 NDB data year.  
 Data Source: CIHI NDB.

**Appendix 2**
**Number of Nurses in the Regulated Nursing Workforce by Urban/Rural Category, Province/Territory and Canada, 2003 and 2010**

Jurisdiction	2003				2010			
	Urban	Rural	Not Stated	Total	Urban	Rural	Not Stated	Total
<b>RNs</b>								
N.L.	3,505	1,901	24	5,430	4,141	1,862	10	6,013
P.E.I.	1,023	346	4	1,373	998	474	0	1,472
N.S.	6,103	2,386	9	8,498	6,840	2,322	11	9,173
N.B.	5,100	2,074	12	7,186	6,468	1,634	0	8,102
Que.	††	††	62,494	62,494	59,278	7,055	0	66,333
Ont.	79,366	5,814	7	85,187	89,437	5,748	0	95,185
Man.	7,655	2,358	21	10,034	8,919	1,983	728	11,630
Sask.	6,291	2,203	9	8,503	7,455	2,082	1	9,538
Alta.	19,974	3,838	225	24,037	25,530	3,151	0	28,681
B.C.	25,724	1,971	16	27,711	29,007	1,904	8	30,919
Y.T.	28†	†	0	290	264	93	0	357
N.W.T./Nun.	32†	34†	5	672	618	491	0	1,109
Canada	155,351	23,238	62,826	241,415	238,955	28,799	758	268,512
<b>NPs</b>								
N.L.	22	33	0	55	48	48	0	96
P.E.I.					†	†	0	†
N.S.	16	7	0	23	75	31	0	106
N.B.	†	†	0	6	42	27	0	69
Que.					57	7	0	64
Ont.	389	105	0	494	1,255	227	0	1,482
Man.					65	20	10	95
Sask.					57	65	0	122
Alta.	41	29	3	73	245	18	0	263
B.C.					114	15	0	129
N.W.T./Nun.	†	†	0	5	2†	3†	0	5†
Canada	477	176	3	656	1,984	492	10	2,486
<b>LPNs</b>								
N.L.	1,498	1,221	0	2,719	1,365	1,130	0	2,495
P.E.I.	470	149	0	619	453	137	0	590
N.S.	1,973	1,048	1	3,022	2,229	1,300	1	3,530
N.B.	1,589	837	3	2,429	1,874	928	0	2,802
Que.	11,536	3,282	13	14,831	17,205	3,039	0	20,244
Ont.	22,521	3,207	2	25,730	27,231	3,192	0	30,423
Man.	1,303	1,109	5	2,417	1,501	1,230	1	2,732
Sask.	1,381	675	0	2,056	1,852	871	0	2,723
Alta.	3,487	1,279	0	4,766	5,761	1,540	0	7,301
B.C.	3,842	540	9	4,391	7,463	772	0	8,235
Y.T.	55	†	†	60	63	0	0	63
N.W.T./Nun.	38	5†	†	98	35	51	0	86
Canada	49,693	13,404	41	63,138	67,032	14,190	2	81,224
<b>RPNs</b>								
Man.	659	296	0	955	651	297	1	949
Sask.	781	157	1	939	703	134	0	837
Alta.	772	353	3	1,128	806	341	0	1,147
B.C.	1,996	80	10	2,086	2,165	76	0	2,241
Canada	4,208	886	14	5,108	4,325	848	1	5,174

† Digit suppressed in accordance with CIHI's privacy policy; digit is from 0 to 9.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Data Source: CIHI NDB.

**Appendix 3**
**Nurse-to-Population Ratios (number of nurses per 100,000 population) by Jurisdiction, Canada 2003 and 2010**

Jurisdiction	RNs				LPNs				RPNs			
	Urban		Rural		Urban		Rural		Urban		Rural	
	2003	2010	2003	2010	2003	2010	2003	2010	2003	2010	2003	2010
N.L.	1486	1665	694	701	635	549	445	425				
P.E.I.	1370	1232	568	800	630	559	245	231				
N.S.	1054	1140	721	722	341	371	317	404				
N.B.	1277	1410	628	559	398	409	253	317				
Que.	††	933	††	456	198	271	213	196				
Ont.	775	784	396	397	220	239	218	220				
Man.	1009	1084	633	514	172	182	298	319	87	79	79	77
Sask.	1104	1185	544	515	242	294	167	215	137	112	39	33
Alta.	838	869	535	445	146	196	178	218	32	27	49	48
B.C.	744	753	369	349	111	194	101	141	58	56	15	14
Canada*	652	871	377	477	202	244	220	235	59	52	44	41

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Canada\* RN ratios for Canada in 2003 exclude Quebec.

Data Source: CIHI NDB.





**Appendix 4**
**Female/Male Counts of the Regulated Nursing Workforce by Urban/Rural Location, Province/Territory and Canada, 2003 and 2010**

Jurisdiction	Urban 2003			Rural 2003			Urban 2010			
	Female	Male	Total	Female	Male	Total	Female	Male	Other	Total
<b>RNs</b>										
N.L.	3363	142	3505	1821	80	1901	3911	230	0	4141
P.E.I.	987	36	1023	33†	8	34†	975	23	0	998
N.S.	5896	207	6103	2334	52	2386	6525	315	0	6840
N.B.	4881	219	5100	2000	74	2074	6151	317	0	6468
Que.	††	††	††	††	††	††	53457	5821	0	59278
Ont.	76271	3095	79366	5635	179	5814	84891	4546	0	89437
Man.	7247	408	7655	2272	86	2358	†††	†††	8919	8919
Sask.	6053	238	6291	2172	31	2203	7002	453	0	7455
Alta.	19284	690	19974	3725	113	3838	24257	1273	0	25530
B.C.	24517	1207	25724	1894	77	1971	27094	1913	0	29007
Y.T.	264	23	287	†	0	†	239	25	0	264
N.W.T./Nun.	289	34	323	310	34	344	560	58	0	618
Canada	149052	6299	155351	22504	734	23238	215062	14974	8919	238955
<b>NPs</b>										
N.L.	20	†	2†	30	†	3†	41	7	0	48
P.E.I.							†	0	0	†
N.S.	1†	†	16	†	0	†	7†	†	0	75
N.B.	†	0	†	†	0	†	41	†	0	4†
Que.							5†	†	0	57
Ont.	369	20	389	10†	†	105	1198	57	0	1255
Man.							0	0	65	65
Sask.							5†	†	0	57
Alta.	3†	†	41	24	5	29	228	17	0	245
B.C.							108	6	0	114
N.W.T./Nun.	†	0	†	†	0	†	22	†	0	2†
Canada	451	26	477	166	10	176	1819	100	65	1984
<b>LPNs</b>										
N.L.	1238	260	1498	1103	118	1221	1169	196	0	1365
P.E.I.	428	42	470	14†	†	149	406	47	0	453
N.S.	1855	118	1973	1018	30	1048	2090	139	0	2229
N.B.	1419	170	1589	773	64	837	1635	239	0	1874
Que.	10650	886	11536	2981	301	3282	15605	1600	0	17205
Ont.	21042	1479	22521	3137	70	3207	25288	1943	0	27231
Man.	1251	52	1303	1072	37	1109	1396	105	0	1501
Sask.	1332	49	1381	671	†	67†	1763	89	0	1852
Alta.	3282	205	3487	1255	24	1279	5376	385	0	5761
B.C.	3487	355	3842	519	21	540	6780	683	0	7463
Y.T.	5†	†	55	†	0	†	60	†	0	6†
N.W.T./Nun.	3†	†	38	4†	†	53	33	†	0	3†
Canada	46071	3622	49693	12727	677	13404	61601	5431	0	67032
<b>RPNs</b>										
Man.	505	154	659	220	76	296	512	139	0	651
Sask.	654	127	781	140	17	157	583	120	0	703
Alta.	592	180	772	239	114	353	619	187	0	806
B.C.	1544	452	1996	56	24	80	1649	516	0	2165
Canada	3295	913	4208	655	231	886	3363	962	0	4325

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

††† no Female/Male designations provided for 2010 Manitoba NDB records for RNs.

Data Source: CIHI NDB.

2010				
Rural 2010				
Female	Male	Other	Total	
1780	82	0	1862	
461	13	0	474	
2259	63	0	2322	
1580	54	0	1634	
6379	676	0	7055	
5547	201	0	5748	
†††	†††	1983	1983	
2017	65	0	2082	
3055	96	0	3151	
1794	110	0	1904	
81	12	0	93	
438	53	0	491	
25391	1425	1983	28799	
4†	†	0	48	
†	0	0	†	
31	0	0	31	
2†	†	0	27	
†	†	0	7	
219	8	0	227	
0	0	20	20	
6†	†	0	65	
1†	†	0	18	
14	†	0	1†	
33	0	0	33	
451	21	20	492	
1036	94	0	1130	
13†	†	0	137	
1259	41	0	1300	
857	71	0	928	
2820	219	0	3039	
3119	73	0	3192	
1172	58	0	1230	
861	10	0	871	
1512	28	0	1540	
736	36	0	772	
0	0	0	0	
4†	†	0	51	
13550	640	0	14190	
224	73	0	297	
122	12	0	134	
239	102	0	341	
61	15	0	76	
646	202	0	848	

**Appendix 5**
**Average Age (in years) of the Regulated Nursing Workforce by Urban/Rural Location and Province/Territory of Registration, Canada, 2003 and 2010**

Jurisdiction	RNs				LPNs				RPNs			
	Urban		Rural		Urban		Rural		Urban		Rural	
	2003	2010	2003	2010	2003	2010	2003	2010	2003	2010	2003	2010
N.L.	41.5	43.1	40.3	42.7	43.4	44.2	44.3	46.0				
P.E.I.	44.8	47.8	44.8	46.1	44.5	47.3	43.9	47.4				
N.S.	44.4	46.5	45.6	47.8	43.1	45.3	42.6	44.9				
N.B.	43.8	45.0	42.7	46.1	42.4	43.3	43.7	44.5				
Que.	††	43.3	††	44.5	44.7	41.4	43.4	42.7				
Ont.	45.0	46.3	46.4	48.9	44.5	44.0	45.3	45.7				
Man.	44.6	†††	45.5	†††	45.2	46.1	44.8	46.1	45.9	47.1	46.4	48.9
Sask.	44.4	44.7	46.1	47.4	43.6	42.1	46.0	44.4	44.8	49.4	45.6	49.3
Alta.	44.5	44.7	45.9	47.4	43.6	41.3	46.6	45.7	46.4	47.6	45.3	47.6
B.C.	45.5	46.1	47.0	48.1	45.0	40.9	47.0	44.3	46.9	47.1	49.6	50.8
Y.T.	44.0	44.0	49.7	48.2	45.8	46.4	47.3	†				
N.W.T./Nun.	43.3	44.7	45.4	46.1	41.2	44.1	45.2	47.4				
Canada*	44.8	45.2	45.3	46.6	44.4	42.8	44.6	44.8	46.3	47.6	46.1	48.6

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

††† data to compute average ages were not submitted by Manitoba for the 2010 NDB data year.

Canada\* RN average ages for Canada exclude Quebec in 2003 and Manitoba in 2010.

Data Source: CIHI NDB.



**Appendix 6**
**Percentage (%) Distribution by Age Groups of the Regulated Nursing Workforce by Urban/Rural Location and Province/Territory**

	Age Group (Years)								
	<30	30-34	35-39	40-44	45-49	50-54	55-59	60+	Total
<b>RNs 2003</b>									
<b>Urban</b>									
N.L.	11.6	13.6	18.3	18.1	17.0	11.7	7.1	2.7	100.0
P.E.I.	8.7	9.7	13.3	16.7	15.2	17.8	11.4	7.2	100.0
N.S.	6.8	9.1	15.0	19.1	19.0	15.3	10.8	5.0	100.0
N.B.	8.1	9.7	15.9	17.9	17.6	16.9	10.2	3.8	100.0
Que.	††	††	††	††	††	††	††	††	††
Ont.	8.0	10.1	13.5	15.1	16.6	17.1	12.1	7.5	100.0
Man.	7.3	10.2	13.7	17.1	18.3	16.9	10.6	6.1	100.0
Sask.	9.2	9.8	12.7	16.5	18.2	16.6	10.4	6.7	100.0
Alta.	9.9	10.7	12.9	14.5	17.1	15.9	11.4	7.6	100.0
B.C.	7.9	9.1	11.3	14.9	18.2	17.6	13.6	7.5	100.0
Y.T.	10.5	9.8	11.5	16.7	19.5	17.8	10.8	3.5	100.0
N.W.T./Nun.	9.4	12.5	15.9	17.8	16.5	14.0	7.5	6.5	100.0
Canada*	8.3	10.0	13.3	15.5	17.2	16.8	11.8	7.1	100.0
<b>Rural</b>									
N.L.	15.3	16.2	18.3	15.2	14.9	12.6	5.7	2.0	100.0
P.E.I.	6.9	10.1	15.6	16.5	14.5	15.9	13.6	6.9	100.0
N.S.	4.9	8.3	12.3	18.4	21.3	17.8	11.1	5.9	100.0
N.B.	8.2	12.6	18.9	17.2	17.4	14.6	7.6	3.5	100.0
Que.	††	††	††	††	††	††	††	††	††
Ont.	4.8	9.7	11.0	13.3	18.8	21.0	13.7	7.8	100.0
Man.	4.5	8.7	14.5	15.8	21.4	18.5	10.2	6.4	100.0
Sask.	4.6	10.3	10.6	15.0	21.3	17.8	11.7	8.7	100.0
Alta.	6.1	8.6	12.5	15.4	18.2	17.8	13.1	8.3	100.0
B.C.	4.7	6.7	10.8	14.0	19.7	21.5	15.2	7.5	100.0
Y.T.	0.0	0.0	0.0	28.6	42.9	0.0	28.6	0.0	100.0
N.W.T./Nun.	9.2	11.8	10.1	14.2	17.2	16.0	10.7	11.0	100.0
Canada*	6.2	9.9	13.1	15.2	19.0	18.2	11.7	6.8	100.0
<b>NPs 2003</b>									
<b>Urban</b>									
N.L.	0.0	22.7	13.6	27.3	27.3	9.1	0.0	0.0	100.0
P.E.I.									
N.S.	6.3	18.8	12.5	31.3	12.5	12.5	0.0	6.3	100.0
N.B.	0.0	0.0	0.0	40.0	40.0	0.0	0.0	20.0	100.0
Que.									
Ont.	1.8	6.4	20.1	24.7	22.4	17.2	6.2	1.3	100.0
Man.									
Sask.									
Alta.	0.0	4.9	12.2	19.5	22.0	29.3	7.3	4.9	100.0
B.C.									
N.W.T./Nun.	0.0	0.0	0.0	33.3	16.7	50.0	0.0	0.0	100.0
Canada	1.7	7.3	18.4	24.8	22.3	18.0	5.6	1.9	100.0
<b>Rural</b>									
N.L.	6.1	18.2	21.2	27.3	15.2	9.1	0.0	3.0	100.0
P.E.I.									
N.S.	14.3	14.3	14.3	14.3	14.3	28.6	0.0	0.0	100.0
N.B.	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0

## Age Group (Years)

	<30	30-34	35-39	40-44	45-49	50-54	55-59	60+	Total
<b>RNs 2010</b>									
<b>Urban</b>									
N.L.	12.9	11.3	12.6	16.5	16.8	13.9	10.7	5.4	100.0
P.E.I.	8.0	8.3	8.8	12.0	16.0	13.6	16.5	16.6	100.0
N.S.	9.6	7.2	9.2	12.7	18.3	17.5	14.5	10.9	100.0
N.B.	11.7	9.3	10.5	14.3	16.5	15.4	13.4	8.9	100.0
Que.	16.1	11.6	11.3	12.4	13.5	15.5	12.1	7.5	100.0
Ont.	9.9	8.9	11.1	12.5	15.3	14.0	14.8	13.5	100.0
Man.	9.2	9.9	11.5	12.9	15.7	15.2	14.7	10.8	100.0
Sask.	15.7	9.9	10.0	10.7	13.2	14.7	14.6	11.1	100.0
Alta.	13.3	11.5	11.9	12.3	13.2	12.9	13.0	11.9	100.0
B.C.	10.3	10.0	11.2	11.6	13.6	15.4	15.0	13.0	100.0
Y.T.	12.5	10.2	14.4	12.1	14.8	16.3	12.5	7.2	100.0
N.W.T./Nun.	10.2	14.9	11.7	12.1	13.1	14.4	12.5	11.2	100.0
Canada*	12.1	10.1	11.2	12.4	14.5	14.6	13.8	11.3	100.0
<b>Rural</b>									
N.L.	14.5	10.4	14.2	16.4	16.5	12.5	9.7	5.8	100.0
P.E.I.	11.0	7.6	9.5	16.2	16.5	12.7	12.7	13.9	100.0
N.S.	8.3	6.6	9.5	10.2	16.2	18.2	17.1	13.9	100.0
N.B.	8.5	6.5	10.6	15.8	18.5	16.8	14.6	8.7	100.0
Que.	12.7	10.0	11.2	12.5	15.0	18.9	13.2	6.6	100.0
Ont.	5.5	5.9	10.0	12.0	14.6	15.8	20.0	16.3	100.0
Man.	8.0	7.7	8.4	13.3	15.3	17.2	18.2	12.1	100.0
Sask.	10.0	7.1	9.5	10.0	14.0	17.1	19.4	13.0	100.0
Alta.	8.7	8.3	10.4	12.0	13.1	15.6	16.7	15.2	100.0
B.C.	7.3	8.6	9.2	8.9	15.2	15.8	19.4	15.7	100.0
Y.T.	5.4	12.9	10.8	6.5	16.1	14.0	18.3	16.1	100.0
N.W.T./Nun.	12.2	13.2	10.6	7.7	12.2	11.4	15.5	17.1	100.0
Canada*	9.4	8.1	10.4	12.2	15.0	16.6	16.4	11.9	100.0
<b>NPs 2010</b>									
<b>Urban</b>									
N.L.	0.0	10.4	22.9	12.5	27.1	14.6	12.5	0.0	100.0
P.E.I.	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	100.0
N.S.	2.7	6.7	10.7	20.0	34.7	17.3	6.7	1.3	100.0
N.B.	2.4	16.7	7.1	26.2	14.3	19.1	9.5	4.8	100.0
Que.	10.5	33.3	21.1	15.8	8.8	5.3	5.3	0.0	100.0
Ont.	1.6	11.6	12.3	18.3	22.4	16.3	13.1	4.5	100.0
Man.	3.1	32.3	9.2	23.1	16.9	4.6	9.2	1.5	100.0
Sask.	5.3	3.5	10.5	12.3	21.1	28.1	10.5	8.8	100.0
Alta.	1.2	14.3	18.4	17.1	22.5	12.7	9.4	4.5	100.0
B.C.	0.0	12.7	20.9	19.1	20.9	19.1	7.3	0.0	100.0
N.W.T./Nun.	0.0	12.5	12.5	16.7	25.0	25.0	4.2	4.2	100.0
Canada	1.9	13.0	13.7	18.2	22.2	15.7	11.5	3.9	100.0
<b>Rural</b>									
N.L.	0.0	6.3	10.4	20.8	29.2	14.6	14.6	4.2	100.0
P.E.I.	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
N.S.	0.0	9.7	22.6	12.9	25.8	12.9	16.1	0.0	100.0
N.B.	0.0	21.4	17.9	21.4	14.3	10.7	14.3	0.0	100.0

Que.									
Ont.	0.0	5.8	18.3	26.0	29.8	13.5	1.9	4.8	100.0
Man.									
Sask.									
Alta.	0.0	7.1	10.7	3.6	10.7	21.4	25.0	21.4	100.0
B.C.									
N.W.T./Nun.	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0
Canada	1.7	8.5	17.1	21.6	23.9	14.2	6.3	6.8	100.0
<b>LPNs 2003</b>									
<b>Urban</b>									
N.L.	8.5	11.3	15.6	18.4	16.2	15.2	13.0	1.8	100.0
P.E.I.	6.6	9.4	15.5	19.2	17.9	15.1	10.4	6.0	100.0
N.S.	9.6	11.8	14.5	18.3	18.8	14.7	9.1	3.3	100.0
N.B.	14.4	12.6	12.3	14.7	16.6	15.5	10.3	3.6	100.0
Que.	9.8	7.8	11.1	15.5	19.1	20.2	12.8	3.7	100.0
Ont.	8.7	10.0	12.7	15.5	18.1	17.7	11.7	5.4	100.0
Man.	10.0	8.9	10.5	13.9	16.4	19.4	14.8	6.1	100.0
Sask.	16.2	7.4	9.0	14.1	20.5	17.4	10.0	5.6	100.0
Alta.	16.1	9.0	9.9	14.1	16.4	14.7	13.0	7.0	100.0
B.C.	9.7	9.2	10.1	14.3	19.2	18.4	13.6	5.5	100.0
Y.T.	5.7	9.4	9.4	26.4	13.2	22.6	7.6	5.7	100.0
N.W.T./Nun.	5.3	7.9	15.8	23.7	18.4	15.8	7.9	5.3	100.0
Canada	10.0	9.5	12.0	15.5	18.2	17.9	12.1	4.9	100.0
<b>Rural</b>									
N.L.	7.5	7.9	14.4	18.0	20.6	17.8	12.0	1.8	100.0
P.E.I.	11.4	10.7	10.1	13.4	20.8	18.1	9.4	6.0	100.0
N.S.	11.6	12.5	14.8	17.7	16.5	13.2	9.7	4.0	100.0
N.B.	10.6	8.5	13.6	16.6	20.4	14.3	12.0	3.9	100.0
Que.	11.4	8.0	12.5	16.9	19.7	20.4	9.6	1.5	100.0
Ont.	7.9	9.6	10.2	14.7	19.0	20.1	13.9	4.6	100.0
Man.	9.5	7.8	11.5	14.9	20.0	18.0	13.0	5.2	100.0
Sask.	8.4	5.3	7.4	17.6	22.4	18.8	13.9	6.1	100.0
Alta.	7.8	6.7	8.8	14.0	18.8	19.9	14.2	9.9	100.0
B.C.	5.2	5.7	8.1	14.6	24.2	22.0	13.1	7.0	100.0
Y.T.	0.0	22.2	0.0	0.0	33.3	33.3	11.1	0.0	100.0
N.W.T./Nun.	3.8	7.6	13.2	13.2	30.2	15.1	7.6	9.4	100.0
Canada	9.3	8.4	11.5	16.0	19.7	18.8	12.1	4.2	100.0
<b>RPNs 2003</b>									
<b>Urban</b>									
Man.	4.4	5.6	10.5	22.2	22.9	21.2	8.4	4.9	100.0
Sask.	3.9	12.3	15.8	18.9	17.9	14.7	9.0	7.5	100.0
Alta.	4.9	6.4	13.8	16.1	17.7	18.2	16.5	6.4	100.0
B.C.	6.3	8.4	11.7	13.4	14.1	17.8	19.4	9.0	100.0
Canada	5.3	8.3	12.6	16.2	16.8	17.9	15.3	7.6	100.0
<b>Rural</b>									
Man.	1.0	8.1	12.8	18.6	23.3	16.9	13.2	6.1	100.0
Sask.	6.0	13.3	11.9	14.6	13.3	16.6	17.2	7.3	100.0
Alta.	4.8	8.0	18.5	16.2	17.7	12.5	16.0	6.3	100.0
B.C.	2.5	5.0	2.5	15.0	22.5	25.0	20.0	7.5	100.0
Canada	3.5	8.7	14.0	16.6	19.3	15.8	15.6	6.5	100.0

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Canada\* RN percentages for Canada in 2003 exclude Quebec.

Data Source: CIHI NDB.



Que.	0.0	14.3	71.4	0.0	14.3	0.0	0.0	0.0	100.0
Ont.	2.6	10.1	9.7	17.6	18.9	18.9	17.6	4.4	100.0
Man.	10.0	25.0	25.0	10.0	10.0	10.0	10.0	0.0	100.0
Sask.	1.5	6.2	9.2	4.6	23.1	24.6	26.2	4.6	100.0
Alta.	0.0	0.0	29.4	17.7	17.7	5.9	5.9	23.5	100.0
B.C.	0.0	13.3	6.7	0.0	46.7	20.0	13.3	0.0	100.0
N.W.T./Nun.	0.0	3.0	9.1	15.2	18.2	15.2	21.2	18.2	100.0
Canada	1.8	9.8	13.2	14.8	20.9	17.1	17.3	5.1	100.0

**LPNs 2010**
**Urban**

N.L.	9.9	11.2	11.1	15.0	19.0	16.8	10.7	6.4	100.0
P.E.I.	6.4	8.0	6.8	15.5	18.5	17.0	14.8	13.0	100.0
N.S.	8.9	10.1	13.2	13.2	16.3	15.5	12.9	10.0	100.0
N.B.	12.1	12.9	13.7	13.9	16.0	13.7	11.4	6.4	100.0
Que.	17.8	13.2	14.0	13.7	13.7	14.4	8.9	4.3	100.0
Ont.	16.2	9.9	11.1	12.3	13.7	13.8	12.8	10.3	100.0
Man.	7.7	10.6	13.5	11.9	14.9	14.9	13.3	13.3	100.0
Sask.	20.4	14.4	10.6	9.7	11.2	12.9	12.3	8.4	100.0
Alta.	24.4	13.1	11.7	9.9	11.1	11.0	9.1	9.6	100.0
B.C.	20.8	13.9	12.5	13.1	13.1	12.1	9.1	5.5	100.0
Y.T.	3.2	4.8	12.7	14.3	25.4	17.5	19.1	3.2	100.0
N.W.T./Nun.	2.9	8.6	22.9	22.9	20.0	14.3	5.7	2.9	100.0
Canada	17.2	11.7	12.2	12.6	13.7	13.7	11.0	8.0	100.0

**Rural**

N.L.	6.6	9.8	9.8	14.3	17.4	20.3	14.3	7.4	100.0
P.E.I.	5.1	7.3	8.8	19.0	13.1	19.0	19.0	8.8	100.0
N.S.	9.7	9.2	13.3	14.9	15.2	17.2	10.5	10.0	100.0
N.B.	11.3	11.0	11.6	13.5	15.5	16.6	12.4	8.1	100.0
Que.	16.2	10.5	11.0	12.8	16.7	19.3	9.8	3.7	100.0
Ont.	14.2	7.6	10.7	9.8	14.0	14.5	15.9	13.4	100.0
Man.	10.2	10.2	10.6	11.9	12.0	17.3	14.8	13.1	100.0
Sask.	17.0	10.0	9.4	7.8	14.2	17.8	14.1	9.6	100.0
Alta.	15.3	9.0	10.2	8.9	11.6	16.2	14.1	14.9	100.0
B.C.	14.0	11.8	10.1	10.4	13.1	18.5	13.7	8.4	100.0
Y.T.									
N.W.T./Nun.	9.8	5.9	9.8	9.8	13.7	31.4	15.7	3.9	100.0
Canada	13.2	9.5	10.8	11.6	14.6	17.3	13.2	9.8	100.0

**RPNs 2010**
**Urban**

Man.	7.4	9.1	6.8	10.6	18.1	22.3	17.5	8.3	100.0
Sask.	1.3	3.1	10.2	15.4	21.3	18.5	15.8	14.4	100.0
Alta.	9.2	7.9	4.3	15.1	16.4	16.0	14.6	16.4	100.0
B.C.	7.2	8.6	12.0	13.0	15.6	14.7	13.3	15.7	100.0
Canada	6.6	7.7	9.5	13.4	17.0	16.7	14.6	14.5	100.0

**Rural**

Man.	6.1	5.1	8.4	9.8	17.5	19.5	19.9	13.8	100.0
Sask.	4.5	2.2	8.2	20.9	14.9	16.4	13.4	19.4	100.0
Alta.	9.4	6.7	8.5	12.3	14.7	16.4	15.8	16.1	100.0
B.C.	2.6	2.6	11.8	7.9	14.5	19.7	22.4	18.4	100.0
Canada	6.8	5.1	8.7	12.4	15.7	17.8	17.5	16.0	100.0

**Appendix 7**
**Employment Status Counts for the Regulated Nursing Workforce by Urban/Rural Location, Province/Territory and Canada, 2003**

Registration Location	Urban 2003			Rural 2003			Urban 2010		
	Full Time	Part Time	Casual	Full Time	Part Time	Casual	Full Time	Part Time	Casual
<b>RNs</b>									
N.L.	2510	679	316	1440	237	224	3020	667	454
P.E.I.	560	413	50	151	182	13	528	349	121
N.S.	3805	1658	640	1391	693	302	4500	1656	683
N.B.	3140	1472	488	1228	645	201	4251	1615	602
Que.	††	††	††	††	††	††	33920	19254	5973
Ont.	40774	22248	5745	2574	2131	409	59177	22950	7310
Man.	3660	3537	458	964	1238	156	4118	3928	780
Sask.	3591	1975	725	1016	963	224	4638	1911	906
Alta.	8623	8240	3111	1470	1791	577	10467	11604	3459
B.C.	13314	8010	4400	852	688	431	14386	6703	7400
Y.T.	142	90	55	†	†	0	133	103	28
N.W.T./Nun.	210	50	63	23†	2†	78	328	0	290
Canada	80329	48372	16051	11324	8598	2615	139466	70740	28006
<b>NPs</b>									
N.L.	19	†	†	3†	0	2	43	†	†
P.E.I.							†	0	†
N.S.	16	0	0	5	†	†	64	11	0
N.B.	†	0	0	†	0	0	36	†	†
Que.							52	†	†
Ont.	231	80	14	75	17	†	1043	177	35
Man.							4†	19	†
Sask.							46	0	11
Alta.	31	†	†	23	†	†	171	60	14
B.C.							65	20	26
N.W.T./Nun.	†	0	0	†	0	0	17	0	6
Canada	306	87	20	136	22	7	1581	297	103
<b>LPNs</b>									
N.L.	942	67	489	662	80	479	965	64	336
P.E.I.	188	164	118	43	68	38	226	153	74
N.S.	1034	471	466	461	301	284	1040	696	399
N.B.	731	528	330	421	263	153	1017	615	242
Que.	4795	5300	1441	1075	1552	655	6906	8156	2143
Ont.	13432	7327	1762	1665	1271	271	15895	8948	2388
Man.	487	717	99	349	637	123	548	814	139
Sask.	733	262	204	293	181	96	1069	441	337
Alta.	1463	1572	452	409	677	193	2781	2271	709
B.C.	2169	492	984	285	72	145	3300	54	4091
Y.T.	34	1†	8	†	0	†	47	10	6
N.W.T./Nun.	27	†	9	4†	7	†	28	0	7
Canada	26035	16915	6362	5708	5109	2442	33822	22222	10871
<b>RPNs</b>									
Man.	411	222	26	199	8†	1†	376	213	53
Sask.	595	18†	†	10†	5†	0	523	124	55
Alta.	477	239	56	235	102	16	456	252	98
B.C.	1406	34†	20†	5†	2†	†	1532	205	417
Canada	2889	991	290	584	262	36	2887	794	623

† Suppressed in accordance with CIHI's privacy policy; small cell size.  
 †† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.  
 Data Source: CIHI NDB.

2003 and 2010			
	Rural 2010		
	Full Time	Part Time	Casual
	1467	173	222
	216	189	69
	1490	572	260
	974	478	182
	3755	2334	952
	3425	1792	531
	813	944	210
	1114	701	267
	1126	1643	382
	730	550	525
	43	11	39
	297	0	194
	15450	9387	3833
	46	†	†
	†	0	0
	27	†	†
	23	†	†
	6	†	0
	189	32	6
	†	11	†
	53	0	12
	1†	7	†
	10	†	†
	22	0	11
	394	58	40
	858	43	229
	45	72	20
	502	461	282
	505	269	154
	1038	1535	466
	1741	1184	267
	404	684	142
	407	289	173
	527	733	280
	301	†	46†
	0	0	0
	46	†	†
	6374	5275	2483
	186	80	27
	91	28	15
	208	94	39
	54	12	10
	539	214	91

Appendix 8

Proportion (%) of the Regulated Nursing Workforce with Multiple Employment Status, 2003 and 2010

Registration Location	2003		2010	
	Urban	Rural	Urban	Rural
<b>RNs</b>				
N.L.	6.8	10.5	11.1	15.1
P.E.I.	10.4	11.8	14.3	11.0
N.S.	6.3	7.9	9.5	9.6
N.B.	12.0	12.3	9.2	11.7
Que.	††	††	9.4	7.2
Ont.	10.3	9.9	13.2	11.1
Man.	7.4	8.4	0.0	0.0
Sask.	15.4	26.1	20.0	25.7
Alta.	18.8	20.0	17.0	16.3
B.C.	23.8	29.8	19.7	23.1
Y.T.	†	†	21.2	30.1
N.W.T./Nun.	2†	1†	71.6	54.6
Canada*	13.5	14.8	13.5	13.1
<b>NPs</b>				
Canada	19.3	14.5	21.9	33.9
<b>LPNs</b>				
N.L.	6.6	11.2	11.9	16.6
P.E.I.	16.0	25.5	14.1	23.4
N.S.	14.7	15.0	14.9	14.7
N.B.	11.1	13.5	7.2	9.5
Que.	14.4	13.4	15.4	13.0
Ont.	12.7	12.1	16.5	12.7
Man.	24.0	29.8	21.6	26.9
Sask.	18.3	30.3	15.5	33.5
Alta.	23.7	18.1	21.5	19.4
B.C.	22.1	19.7	26.8	29.4
Y.T.	29.2	0.0	†	0.0
N.W.T./Nun.	0.0	0.0	†	†
Canada	14.9	15.9	17.4	17.3
<b>RPNs</b>				
Man.	16.5	15.9	19.8	12.1
Sask.	13.7	19.1	20.6	12.7
Alta.	17.7	11.6	16.6	11.1
B.C.	20.1	20.0	28.2	26.0
Canada	17.9	15.1	23.5	13.0

† Suppressed in accordance with CIHI's privacy policy; small cell size.  
 †† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.  
 Canada\* 2003 percentages for RNs excludes Quebec.  
 Data Source: CIHI NDB.

## Appendix 9

## Place of Work Counts for the Regulated Nursing Workforce by Urban/Rural Location, Province/Territory and Canada, 2003 and

Registration Location	Urban 2003				Rural 2003			
	Hospital	Community Health Agency	Nursing Home/ LTC Facility	Other	Hospital	Community Health Agency	Nursing Home/ LTC Facility	Other
<b>RNs</b>								
N.L.	2542	249	334	380	1195	369	260	77
P.E.I.	663	70	158	132	190	61	67	28
N.S.	4554	488	544	517	1386	34†	415	24†
N.B.	3821	219	370	673	1421	162	334	150
Que.	††	††	††	††	††	††	††	††
Ont.	48771	10317	5261	12586	2744	960	1055	880
Man.	4819	982	827	938	1314	485	362	175
Sask.	4183	749	547	800	764	785	496	152
Alta.	13261	2297	1471	2726	2102	810	566	313
B.C.	16369	3213	3302	2697	1011	410	352	192
Y.T.	136	86	24	40	0	†	0	†
N.W.T./Nun.	157	73	8	73	101	201	11	24
Canada	99276	18743	12846	21562	12228	4588	3918	2234
<b>NPs</b>								
N.L.	†	†	†	9	14	12	†	5
P.E.I.								
N.S.	10	†	0	†	†	†	0	†
N.B.	†	†	0	†	†	0	0	0
Que.								
Ont.	88	172	1†	98	12	51	†	39
Man.								
Sask.								
Alta.	20	14	0	6	†	22	0	†
B.C.								
N.W.T./Nun.	0	†	0	†	†	0	0	0
Canada	128	191	22	122	35	8†	†	47
<b>LPNs</b>								
N.L.	720	†	73†	25	488	35	671	18
P.E.I.	214	20	198	32	84	13	47	5
N.S.	921	250	672	116	476	50	443	69
N.B.	943	4†	540	5†	293	14	516	13
Que.	4489	105	6192	662	1114	43	1936	170
Ont.	10693	2087	6137	2462	1330	213	1201	304
Man.	335	106	701	161	673	76	313	47
Sask.	996	70	228	85	413	97	140	25
Alta.	1953	305	950	279	838	100	282	59
B.C.	2207	172	1170	284	249	27	229	35
Y.T.	19	0	25	11	†	0	†	0
N.W.T./Nun.	23	0	†	1†	3†	0	1†	5
Canada	23513	3163	17551	4187	5994	668	5791	750
<b>RPNs</b>								
Man.	196	163	234	66	14	224	47	10
Sask.	322	66	259	124	29	31	79	13
Alta.	431	153	82	104	215	64	45	28
B.C.	910	461	335	272	14	27	25	14
Canada	1859	843	910	566	272	346	196	65

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Data Source: CIHI NDB.

2010								
Urban 2010					Rural 2010			
Hospital	Community Health Agency	Nursing Home/ LTC Facility	Other	Hospital	Community Health Agency	Nursing Home/ LTC Facility	Other	
2963	350	284	543	1107	408	225	121	
583	24	143	248	271	22	76	105	
4831	603	586	816	1278	334	420	288	
4702	506	446	814	753	433	352	96	
35425	5725	5961	12167	2138	1191	2142	1584	
58724	14279	6725	8733	2725	1095	1129	732	
5729	1449	910	801	1070	429	357	121	
4690	1022	572	1102	713	680	536	112	
17019	3243	1542	3677	1716	769	470	194	
15649	2692	1801	1937	767	215	135	71	
141	58	27	37	7	77	0	†	
271	193	9	135	149	267	5	6†	
150727	30144	19006	31010	12694	5920	5847	3492	
21	†	†	20	16	21	†	10	
†	†	0	0	0	†	0	0	
52	†	†	13	†	13	0	1†	
18	†	†	15	7	15	0	5	
43	6	0	8	†	5	0	†	
545	385	38	273	14	115	†	90	
2†	23	†	12	†	7	0	8	
9	24	†	23	†	40	0	2†	
160	27	†	54	†	†	0	7	
53	20	†	14	†	†	0	†	
5	8	0	10	†	19	0	1†	
935	512	54	442	54	248	7	172	
636	22	682	25	474	64	578	14	
221	2†	16†	43	67	12	48	10	
770	299	692	63	652	147	425	17	
1215	62	538	59	337	50	517	24	
5937	263	6053	1910	1164	65	1566	103	
12164	3206	9715	1614	1209	212	1449	241	
424	155	791	117	676	126	374	45	
1358	107	321	62	447	144	265	14	
2662	947	1565	587	368	943	142	87	
3464	421	2970	508	306	45	382	31	
21	†	39	†	0	0	0	0	
19	0	†	1†	27	0	17	7	
28891	5509	23532	5003	5727	1808	5763	593	
218	155	176	102	149	82	50	16	
197	153	227	123	8	44	73	8	
447	213	65	80	210	66	42	23	
1091	527	262	278	14	36	14	11	
1953	1048	730	583	381	228	179	58	

**Appendix 10**
**Counts and Percentages (%) of the Regulated Nursing Workforce by Primary Position by Urban/Rural Location, Canada 2003 and 2010**

	Managerial Positions			Staff	Other Positions		
	Chief Nursing Officer/CEO	Director/Assistant Director	Manager/Assistant Manager	Staff/Community Nurse	Instructor/Professor/Educator	Researcher	Consultant
<b>RNs 2003</b>							
Urban	712	2164	7615	117008	5077	1206	5094
Rural	302	473	1701	18114	361	29	378
Not Stated	727	131	8649	42598	1740	397	1828
Canada	1741	2768	17965	177720	7178	1632	7300
Urban %	0.47	1.44	5.06	77.79	3.38	0.80	3.39
Rural %	1.33	2.08	7.49	79.78	1.59	0.13	1.66
Canada* %	0.76	1.21	7.82	77.40	3.13	0.71	3.18
<b>RNs 2010</b>							
Urban	666	3175	11484	182828	9424	1360	7041
Rural	162	613	1943	22334	603	13	529
Not Stated	9	22	54	309	35	7	52
Canada	837	3810	13481	205471	10062	1380	7622
Urban %	0.28	1.35	4.89	77.80	4.01	0.58	3.00
Rural %	0.57	2.17	6.87	79.02	2.13	0.05	1.87
Canada %	0.32	1.44	5.11	77.86	3.81	0.52	2.89
<b>NPs 2003</b>							
Urban		†	11	44	2†	†	†
Rural		†	7	11	†	0	†
Not Stated		0	0	1	1	0	0
Canada		7	18	56	30	†	10
Urban %		†	2.35	9.38	<10	†	†
Rural %		†	4.05	6.36	<5	0.00	†
Canada %		1.09	2.79	8.68	4.65	†	1.55
<b>NPs 2010</b>							
Urban		†	19	126	63	†	15
Rural		†	12	32	9	0	0
Not Stated		0	0	2	0	0	0
Canada		12	31	160	72	†	15
Urban %		†	0.97	6.43	3.21	†	0.77
Rural %		†	2.44	6.52	1.83	0.00	0.00
Canada %		0.49	1.26	6.51	2.93	†	0.61
<b>LPNs 2003</b>							
Urban				44250	104		
Rural				12073	14		
Not Stated				22	1		
Canada				56345	119		
Urban %				91.47	0.21		
Rural %				91.72	0.11		
Canada %				91.51	0.19		
<b>LPNs 2010</b>							
Urban				60765	536		
Rural				13141	48		
Not Stated				1	0		
Canada				73907	584		
Urban %				91.38	0.81		
Rural %				93.06	0.34		
Canada %				91.67	0.72		

nd 2010

						Not Stated	Total
Other	Coordinator/ Care Manager	LPN Specialty	Clinical Specialist	Nurse Midwife	Nurse Practitioner	Not Stated	Total
9189			1535	5	815	4931	155351
1014			112	†	21†	534	23238
9			403	1†	†	6329	62826
10212			2050	21	1034	11794	241415
6.11			1.02	†	†		100.00
4.47			0.49	†	†		100.00
4.45			0.89	0.01	0.45		100.00
15136			2067	12	1790	3972	238955
1510			125	5	427	535	28799
159			5	3	7	96	758
16805			2197	20	2224	4603	268512
6.44			0.88	0.01	0.76		100.00
5.34			0.44	0.02	1.51		100.00
6.37			0.83	0.01	0.84		100.00
17			11		344	8	477
5			†		143	3	176
0			0		1	0	3
22			1†		488	11	656
3.62			2.35		73.35		100.00
2.89			†		82.66		100.00
3.41			†		75.66		100.00
52			17	†	1655	24	1984
12			†	0	416	†	492
0			0	†	4	†	10
64			20	5	2075	3†	2486
2.65			0.87	†	84.44		100.00
2.44			†	0.00	84.73		100.00
2.60			0.81	0.20	84.38		100.00
2946	617	461				1315	49693
856	156	64				241	13404
5	2	1				10	41
3807	775	526				1566	63138
6.09	1.28	0.95					100.00
6.50	1.19	0.49					100.00
6.18	1.26	0.85					100.00
3286	935	978				532	67032
603	199	130				69	14190
0	0	1				0	2
3889	1134	1109				601	81224
4.94	1.41	1.47					100.00
4.27	1.41	0.92					100.00
4.82	1.41	1.38					100.00

<b>RPNS 2003</b>							
Urban	19	77	278	3181	91		68
Rural	5	20	64	684	6		8
Not Stated	0	0	1	9	0		2
Canada	24	97	343	3874	97		78
Urban %	0.46	1.87	6.74	77.15	2.21		1.65
Rural %	0.58	2.32	7.42	79.35	0.70		0.93
Canada %	0.48	1.94	6.86	77.51	1.94		1.56
<b>RPNS 2010</b>							
Urban	36	110	282	3361	113		69
Rural	5	6	76	683	16		14
Not Stated	0	0	0	1	0		0
Canada	41	116	358	4045	129		83
Urban %	0.84	2.55	6.55	78.04	2.62		1.60
Rural %	0.59	0.71	8.99	80.83	1.89		1.66
Canada %	0.80	2.25	6.95	78.50	2.50		1.61

† Suppressed in accordance with CIHI's privacy policy; small cell size.

Canada\* no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Data Source: CIHI NDB.



337			72			85	4208
57			18			24	886
1			0			1	14
395			90			110	5108
8.17			1.75				100.00
6.61			2.09				100.00
7.90			1.80				100.00
231			105			18	4325
35			10			3	848
0			0			0	1
266			115			21	5174
5.36			2.44				100.00
4.14			1.18				100.00
5.16			2.23				100.00

**Appendix 11**
**Counts of the Regulated Nursing Workforce by Primary Responsibility by Urban/Rural Location, Province/Territory, Canada, 2010**

Registration Location	Urban 2003				Rural 2003				Urban 2010
	Direct Care	Administration	Education	Research	Direct Care	Administration	Education	Research	Direct Care
<b>RNs</b>									
N.L.	3065	210	177	53	174†	126	29	†	3603
P.E.I.	900	76	42	5	323	19	†	0	856
N.S.	5446	280	271	106	2127	136	108	15	6012
N.B.	4597	282	181	20	1894	126	44	†	5745
Que.	††	††	††	††	††	††	††	††	50619
Ont.	66436	4789	4051	869	5007	462	177	7	80346
Man.	6462	544	418	159	2074	179	73	10	7819
Sask.	5574	351	306	47	1998	162	33	†	6635
Alta.	17448	837	936	259	3448	198	105	10	23084
B.C.	23013	1076	1331	213	1824	84	54	†	23629
Y.T.	251	20	11	0	†	0	†	0	214
N.W.T./Nun.	269	21	22	0	307	21	9	0	556
Canada	133461	8486	7746	1731	20748	1513	637	52	209118
<b>NPs</b>									
N.L.	13	†	†	0	31	†	†	0	3†
P.E.I.									†
N.S.	1†	0	†	0	7	0	0	0	70
N.B.	†	†	†	0	†	0	0	0	37
Que.									57
Ont.	363	6	19	†	97	†	†	0	1192
Man.									54
Sask.									51
Alta.	36	†	0	0	25	†	0	0	224
B.C.									92
N.W.T./Nun.	†	0	†	0	†	0	0	0	22
Canada	431	1†	31	†	162	†	7	0	1839
<b>LPNs</b>									
N.L.	1425	†	†	0	1196	0	0	0	1340
P.E.I.	460	†	†	†	14†	0	†	0	439
N.S.	1940	13	†	†	1025	11	†	0	2186
N.B.	1505	71	†	0	812	17	0	0	1726
Que.	11268	0	41	0	3233	0	7	0	16873
Ont.	20226	296	349	44	2911	37	40	†	26261
Man.	127†	26	†	0	1094	14	†	0	1470
Sask.	1362	9	6	†	662	†	1†	0	1827
Alta.	3423	2†	36	†	1270	†	†	0	5608
B.C.	3786	29	19	†	530	†	†	0	7186
Y.T.	5†	†	0	0	†	0	0	0	6†
N.W.T./Nun.	28	0	0	0	44	0	0	0	3†
Canada	46751	476	460	53	12927	92	70	†	65011
<b>RPNs</b>									
Man.	535	77	22	†	246	31	†	0	546
Sask.	713	31	21	†	142	†	†	0	635
Alta.	702	32	13	6	321	20	†	0	729
B.C.	1843	50	51	16	69	†	†	0	1920
Canada	3793	190	107	26	778	65	10	0	3830

2003 and 2010						
			Rural 2010			
Administration	Education	Research	Direct Care	Administration	Education	Research
252	230	55	1687	122	50	†
78	58	6	442	23	9	0
389	337	100	2036	156	125	5
366	311	46	1503	104	2†	†
4600	2348	958	6150	638	149	19
6095	2119	0	5068	491	100	0
623	362	106	1776	158	48	0
285	423	41	1917	8†	39	†
1003	933	263	2926	130	6†	†
1125	1499	209	1438	73	57	0
24	11	†	86	†	†	0
30	11	†	429	32	17	0
14870	8642	1788	25458	2013	687	30
†	7	0	42	†	†	†
0	0	0	†	0	0	0
0	5	0	29	†	†	0
0	5	0	26	0	†	0
0	0	0	7	0	0	0
23	27	0	220	†	†	0
†	†	0	14	6	0	0
†	†	0	62	†	0	0
6	†	†	13	†	†	0
†	6	†	13	0	†	0
†	0	0	26	†	†	0
46	64	6	45†	18	15	†
5	†	0	1126	†	0	0
†	†	0	128	0	†	0
12	11	5	1282	†	5	†
15	99	0	901	0	18	0
106	208	0	3014	†	15	0
409	125	0	3098	36	9	0
14	14	†	1221	†	†	0
14	6	†	863	†	†	†
29	117	7	1524	†	1†	0
63	73	9	756	5	0	0
†	0	0	0	0	0	0
0	†	0	51	0	0	0
674	658	2†	13964	65	65	†
71	29	†	252	38	†	†
38	24	†	123	†	†	0
51	21	†	314	19	8	0
186	44	†	66	9	0	0
346	118	9	755	7†	14	†

† Suppressed in accordance with CIHI's privacy policy; small cell size.  
 †† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.  
 Data Source: CIHI NDB.

The Primary Responsibility categories, defined by CIHI, listed to the left include the following:

**Direct Care**

- Medicine/Surgery
- Psychiatry/Mental Health
- Paediatrics
- Maternity/Newborn
- Geriatrics/Long-term Care
- Critical Care
- Community Health
- Ambulatory Care
- Home Care
- Occupational Health
- Operating Room/Recovery Room
- Emergency Care
- Several Clinical Areas
- Oncology
- Rehabilitation
- Palliative Care
- Public Health
- Other Direct Care

**Administration**

- Nursing Service
- Nursing Education
- Other Administration

**Education**

- Teaching Students
- Teaching Employees
- Teaching Patients/Clients
- Other Education

**Research**

- Nursing Research Only
- Other Research

**Not Stated**

- Not Stated

**Appendix 12**
**Counts of the Regulated Nursing Workforce by Initial Nursing Education by Urban/Rural Location, Province/Territory, Canada,**

Registration Location	Urban 2003			Rural 2003			Urban 2010		
	Diploma	Baccalaureate	Master's	Diploma	Baccalaureate	Master's	Diploma	Baccalaureate	Master's
<b>RNs</b>									
N.L.	2780	72†	†	1507	394	0	2595	154†	†
P.E.I.	827	19†	†	285	61	0	697	301	0
N.S.	4941	116†	†	2068	31†	†	4539	229†	†
N.B.	3895	120†	†	1522	552	0	3863	260†	†
Que.	††	††	††	††	††	††	53578	5602	98
Ont.	69230	10136	0	5366	448	0	65838	23599	0
Man.	6087	156†	†	2089	268	†	5897	3022	0
Sask.	4980	1311	0	1867	336	0	4401	305†	†
Alta.	15233	4733	8	3281	557	0	15531	9988	11
B.C.	21065	4649	10	1737	234	0	18337	10412	18
Y.T.	212	7†	†	†	0	0	143	121	0
N.W.T./Nun.	276	4†	†	27†	68	†	401	21†	†
Canada	129526	25797	28	20000	323†	†	175820	62756	138
Registration Location	Diploma/Certificate	Equivalency		Diploma/Certificate	Equivalency		Diploma/Certificate	Equivalency	
<b>LPNs</b>									
N.L.	1462	36		1209	12		1335	30	
P.E.I.	461	9		14†	†		44†	†	
N.S.	1930	43		1034	14		2229	0	
N.B.	1563	26		829	†		1874	0	
Que.	11299	237		3261	21		16564	641	
Ont.	22516	5		3207	0		27231	0	
Man.	1179	124		1067	42		1309	192	
Sask.	1337	44		661	14		1818	34	
Alta.	3333	154		1212	67		5325	436	
B.C.	3535	307		516	24		7021	442	
Y.T.	55	0		†	0		63	0	
N.W.T./Nun.	38	0		53	0		3†	†	
Canada	48708	985		13199	205		65250	1782	
Registration Location	Diploma	Baccalaureate		Diploma	Baccalaureate		Diploma	Baccalaureate	
<b>RPNs</b>									
Man.	622	37		28†	1†		497	154	
Sask.	781	0		157	0		693	10	
Alta.	764	8		353	0		792	14	
B.C.	1930	66		7†	†		2096	69	
Canada	4097	111		873	13		4078	247	

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Data Source: CIHI NDB.

2003 and 2010			
	Rural 2010		
r's	Diploma	Baccalaureate	Master's
	1215	647	0
	318	156	0
	165†	66†	†
	1065	569	0
	6696	359	0
	4879	869	0
	1500	483	0
	1469	612	0
	2345	806	0
	1356	534	0
	66	27	0
	304	187	0
	2287†	591†	†
	<b>Diploma/ Certificate</b>	<b>Equivalency</b>	
	1119	11	
	137	0	
	1300	0	
	928	0	
	3009	30	
	3192	0	
	1152	78	
	85†	1†	
	153†	†	
	725	47	
	0	0	
	51	0	
	14006	184	
	<b>Diploma</b>	<b>Baccalaureate</b>	
	241	56	
	127	†	
	340	†	
	74	†	
	782	66	

**Appendix 13**
**Counts of the Regulated Nursing Workforce by Highest Nursing Education by Urban/Rural Location, Province/Territory, Canada**

Registration Location	Urban 2003				Rural 2003			
	Diploma	Baccalaureate	Master's	Doctorate	Diploma	Baccalaureate	Master's	Doctorate
<b>RNs</b>								
N.L.	2466	948	8†	†	1451	44†	†	0
P.E.I.	706	301	†	†	246	9†	†	0
N.S.	412†	1811	160	†	1801	548	3†	†
N.B.	3210	1769	115	6	1306	748	19	†
Que.	††	††	††	††	††	††	††	††
Ont.	59885	17730	1675	76	4922	854	3†	†
Man.	5165	2287	189	14	187†	460	20	†
Sask.	4430	1780	74	7	1738	45†	7	†
Alta.	12045	7281	577	71	2841	960	32	5
B.C.	16809	8168	702	45	1487	460	2†	†
Y.T.	15†	126	†	0	†	†	0	0
N.W.T./Nun.	231	85	7	0	214	123	7	0
Canada	109233	42286	3605	227	17885	5157	184	12
<b>NPs</b>								
Canada	75	332	6†	†	75	90	11	0
<b>RPNs</b>								
Man.	607	52	0	0	281	15	0	0
Sask.	774	7	0	0	157	0	0	0
Alta.	762	8	†	†	35†	0	0	†
B.C.	1765	184	4†	†	7†	†	†	†
Canada	3908	251	43	6	863	1†	†	†

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Data Source: CIHI NDB.

**a, 2003 and 2010**

te	Urban 2010				Rural 2010			
	Diploma	Baccalaureate	Master's	Doctorate	Diploma	Baccalaureate	Master's	Doctorate
	2231	1738	162	10	1120	725	17	0
	697	301	0	0	318	156	0	0
	3591	2967	272	10	1389	871	57	5
	2988	3262	20†	1†	843	766	25	0
	39261	18167	1774	76	5144	1824	87	0
	52202	33711	3329	195	4203	1458	87	0
	4906	3735	264	14	1320	631	3†	†
	3598	3619	220	18	1313	739	2†	†
	12235	12309	907	79	1996	1113	35	7
	13149	14288	1288	146	1076	770	46	0
	107	15†	†	0	38	49	6	0
	326	25†	30	†	220	244	2†	†
	135291	94506	8455	567	18980	9346	444	1†
	120	796	1047	20	96	266	130	0
	473	178	0	0	236	61	0	0
	683	20	0	0	126	8	0	0
	777	25	†	†	335	6	0	0
	1901	249	15	0	68	†	†	0
	3834	472	1†	†	765	8†	†	0

**Appendix 14**
**Average Number of Years Since Initial Entry-to-Practice Education of the Regulated Nursing Workforce by Urban/Rural Location, Province/Territory, Canada, 2003 and 2010**

Registration Jurisdiction	Urban/Rural Location	RNs 2003	RNs 2010	NPs 2003	NPs 2010	LPNs 2003	LPNs 2010	RPNs 2003	RPNs 2010
N.L.	Urban	18.5	19.4	20.3	20.7	18.1	17.9		
	Rural	17.2	19.1	17.5	23.9	19.5	20.0		
P.E.I.	Urban	21.6	23.8		27.0	17.7	19.8		
	Rural	21.5	22.1		15.0	17.4	20.7		
N.S.	Urban	21.4	22.8	19.9	22.4	18.3	19.2		
	Rural	22.8	24.3	17.1	21.4	17.8	19.1		
N.B.	Urban	20.3	20.9	23.4	20.4	14.5	13.8		
	Rural	19.5	22.5	27.0	19.4	16.0	15.2		
Que.	Urban	††	19.0		15.5	21.2	13.5		
	Rural	††	20.5		15.4	20.7	17.2		
Ont.	Urban	21.1	22.0	21.1	21.9	18.0	16.5		
	Rural	22.9	24.8	20.6	22.6	20.3	19.8		
Man.	Urban	19.6	20.1		17.9	18.6	17.5	21.5	21.8
	Rural	20.7	21.8		15.8	19.0	18.6	21.7	23.6
Sask.	Urban	20.6	20.5		24.3	19.4	15.5	20.5	25.4
	Rural	23.3	23.7		25.1	23.1	18.3	22.9	25.9
Alta.	Urban	20.4	19.9	21.4	20.2	17.1	13.4	21.4	22.0
	Rural	21.7	22.6	26.2	24.8	21.3	18.9	18.9	21.1
B.C.	Urban	20.8	21.0		20.5	18.0	10.3	19.5	19.4
	Rural	21.7	22.3		20.4	21.2	13.5	23.4	23.4
Y.T.	Urban	19.4	18.1			16.5	16.2		
	Rural	27.3	22.5			17.0			
N.W.T./Nun.	Urban	17.9	18.5	20.3	22.8	14.3	17.0		
	Rural	19.5	19.7	30.0	24.9	17.9	18.0		
Canada*	Urban	20.8	20.7	21.0	21.3	18.6	14.9	20.3	21.2
	Rural	21.6	22.4	20.9	22.6	20.0	18.2	20.9	22.9

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Canada\* excludes Quebec RNs in 2003.

Data Source: CIHI NDB.



## Appendix 15

**Counts of the Regulated Nursing Workforce by Place of Graduation with Initial Entry-to-Practice Education by Urban/Rural Location, Province/Territory, Canada, 2003 and 2010**

Registration Location	Urban 2003		Rural 2003		Urban 2010		Rural 2010	
	Canadian Graduate	International Nursing Graduate	Canadian Graduate	International Nursing Graduate	Canadian Graduate	International Nursing Graduate	Canadian Graduate	International Nursing Graduate
<b>RNs</b>								
N.L.	3450	39	1839	52	4093	46	1811	49
P.E.I.	999	20	341	5	977	16	460	11
N.S.	5964	139	2331	55	6639	201	2251	71
N.B.	5039	61	2049	24	6386	81	1584	50
Que.	††	††	††	††	57538	1740	7015	40
Ont.	69788	9498	5630	184	77999	11319	5573	173
Man.	7145	510	2283	75	8248	671	1896	87
Sask.	5995	214	2121	51	6858	521	1928	128
Alta.	17630	851	3551	73	22571	2872	2936	204
B.C.	21597	3999	1814	139	23636	4538	1743	104
Y.T.	267	20	†	0	244	20	87	5
N.W.T./Nun.	297	25	29†	51	585	32	431	58
Canada	138171	15376	22252	709	215774	22057	27715	980
<b>NPs</b>								
N.L.	21	0	33	0	48	0	48	0
P.E.I.					†	†	†	0
N.S.	16	0	†	0	7†	†	30	†
N.B.	5	0	†	0	40	†	25	†
Que.					55	†	7	0
Ont.	366	2†	100	5	1183	72	222	5
Man.					65	0	20	0
Sask.					46	0	52	0
Alta.	3†	†	27	0	235	10	18	0
B.C.					10†	†	14	0
N.W.T./Nun.	†	0	†	0	23	0	3†	†
Canada	450	24	169	5	1874	92	468	10
<b>LPNs</b>								
N.L.	1493	0	1215	0	1361	0	110†	†
P.E.I.	46†	†	14†	†	45†	†	136	0
N.S.	1964	9	1048	0	2208	21	129†	†
N.B.	158†	†	835	†	1864	10	92†	†
Que.	0	0	0	0	17205	0	3039	0
Ont.	21661	845	3197	9	25838	1384	3175	17
Man.	1268	35	1105	†	1417	84	1212	18
Sask.	1350	31	669	6	182†	2†	862	9
Alta.	3391	90	1267	11	5280	481	1532	8
B.C.	3658	0	525	0	7287	119	757	11
Y.T.	55	0	†	0	63	0	0	0
N.W.T./Nun.	3†	†	5†	†	35	0	51	0
Canada	36927	1020	10065	34	64837	2125	14089	72
<b>RPNs</b>								
Man.	649	10	29†	†	645	6	29†	†
Sask.	764	†	152	0	695	8	13†	†
Alta.	693	79	329	24	693	103	318	18
B.C.	1605	24†	7†	†	1451	214	49	7
Canada	3711	340	845	33	3484	331	790	33

† Suppressed in accordance with CIHI's privacy policy; small cell size. †† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.  
Data Source: CIHI NDB.

**Appendix 16**
**Principal Source Countries of the International Graduates in the Canadian RN Workforce, 2003 and 2010**

RNs 2003								
Total			Urban			Rural		
Graduation Country	Count	%	Graduation Country	Count	%	Graduation Country	Count	%
608 Philippines	4915	27.9	608 Philippines	4427	28.8	826 United Kingdom	245	34.6
826 United Kingdom	4114	23.3	826 United Kingdom	3707	24.1	840 United States	156	22.0
840 United States	1208	6.8	840 United States	983	6.4	608 Philippines	99	14.0
344 Hong Kong	990	5.6	344 Hong Kong	976	6.3	36 Australia	44	6.2
356 India	828	4.7	356 India	786	5.1	356 India	25	3.5
616 Poland	559	3.2	616 Poland	545	3.5	528 Netherlands	21	3.0
36 Australia	397	2.3	388 Jamaica	366	2.4	554 New Zealand	21	3.0
388 Jamaica	382	2.2	36 Australia	343	2.2	372 Ireland (Eire)	19	2.7
250 France	317	1.8	554 New Zealand	270	1.8	276 Germany	17	2.4
554 New Zealand	293	1.7	891 Serbia and Montenegro	237	1.5	710 South Africa	16	2.3
891 Serbia and Montenegro	241	1.4	710 South Africa	185	1.2			
710 South Africa	204	1.2	364 Iran	160	1.0			
332 Haiti	196	1.1	643 Russia	157	1.0			
276 Germany	183	1.0	276 Germany	154	1.0			
642 Romania	175	1.0	642 Romania	144	0.9			
114 other countries	†	†	99 other countries	†	†	23 other countries	†	†
Total (129 countries)	17637	100.0	Total (114 countries)	15376	100.0	Total (33 countries)	709	100.0
RNs 2010								
Total			Urban			Rural		
Graduation Country	Count	%	Graduation Country	Count	%	Graduation Country	Count	%
608 Philippines	7478	32.4	608 Philippines	7262	32.9	826 United Kingdom	267	27.2
826 United Kingdom	3768	16.3	826 United Kingdom	3493	15.8	840 United States	215	21.9
356 India	1510	6.5	356 India	1454	6.6	608 Philippines	204	20.8
840 United States	1453	6.3	840 United States	1235	5.6	356 India	52	5.3
344 Hong Kong	953	4.1	344 Hong Kong	948	4.3	36 Australia	40	4.1
616 Poland	623	2.7	616 Poland	621	2.8	250 France	23	2.3
250 France	536	2.3	250 France	512	2.3	528 Netherlands	23	2.3
364 Iran	422	1.8	364 Iran	418	1.9	276 Germany	19	1.9
156 China	385	1.7	156 China	384	1.7	554 New Zealand	18	1.8
36 Australia	379	1.6	642 Romania	375	1.7	372 Ireland (Eire)	16	1.6
642 Romania	375	1.6	36 Australia	339	1.5	710 South Africa	13	1.3
388 Jamaica	339	1.5	388 Jamaica	333	1.5	756 Switzerland	12	1.2
891 Serbia and Montenegro	308	1.3	891 Serbia and Montenegro	308	1.4	566 Nigeria	7	0.7
810 USSR	251	1.1	810 USSR	251	1.1			
376 Israel	244	1.1	376 Israel	242	1.1			
710 South Africa	231	1.0	332 Haiti	216	1.0			
276 Germany	222	1.0						
140 other countries	†	†	136 other countries	†	†	39 other countries	†	†
Total (157 countries)	23076	100.0	Total (152 countries)	22057	100.0	Total (52 countries)	980	100.0

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Data Source: CIHI NDB.

**Appendix 17**
**Principal Source Countries of the International Graduates in the Canadian NP Workforce, 2003 and 2010**
**NPs 2003**

<b>Total</b>			<b>Urban</b>			<b>Rural</b>		
<b>Graduation Country</b>	<b>Count</b>	<b>%</b>	<b>Graduation Country</b>	<b>Count</b>	<b>%</b>	<b>Graduation Country</b>	<b>Count</b>	<b>%</b>
840 United States	10	34.5	840 United States	8	33.3	826 United Kingdom	†	†
826 United Kingdom	9	31.0	826 United Kingdom	7	29.2	840 United States	†	†
8 other countries	†	†	8 other countries	†	†	36 Australia	†	†
Total (10 countries)	29	100.0	Total (10 countries)	24	100.0	Total (3 countries)	†	100.0

**NPs 2010**

<b>Total</b>			<b>Urban</b>			<b>Rural</b>		
<b>Graduation Country</b>	<b>Count</b>	<b>%</b>	<b>Graduation Country</b>	<b>Count</b>	<b>%</b>	<b>Graduation Country</b>	<b>Count</b>	<b>%</b>
840 United States	45	44.1	840 United States	41	44.6	826 United Kingdom	†	†
826 United Kingdom	24	23.5	826 United Kingdom	18	19.6	840 United States	†	†
23 other countries	†	†	23 other countries	†	†			
Total (25 countries)	102	100.0	Total (25 countries)	92	100.0	Total (2 countries)	10	100.0

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Data Source: CIHI NDB.

**Appendix 18**
**Principal Source Countries of the International Graduates in the Canadian LPN Workforce, 2003 and 2010**
**LPNs 2003**

<b>Total</b>			<b>Urban</b>			<b>Rural</b>		
<b>Graduation Country</b>	<b>Count</b>	<b>%</b>	<b>Graduation Country</b>	<b>Count</b>	<b>%</b>	<b>Graduation Country</b>	<b>Count</b>	<b>%</b>
826 United Kingdom	468	44.4	826 United Kingdom	460	45.1	840 United States	15	44.1
608 Philippines	127	12.0	608 Philippines	124	12.2	826 United Kingdom	8	23.5
840 United States	91	8.6	840 United States	75	7.4			
616 Poland	40	3.8	616 Poland	40	3.9			
356 India	27	2.6	356 India	27	2.6			
388 Jamaica	27	2.6	388 Jamaica	27	2.6			
344 Hong Kong	22	2.1	344 Hong Kong	22	2.2			
328 Guyana	20	1.9	328 Guyana	20	2.0			
586 Pakistan	19	1.8	586 Pakistan	19	1.9			
891 Serbia and Montenegro	18	1.7	891 Serbia and Montenegro	18	1.8			
288 Ghana	17	1.6						
364 Iran	12	1.1						
276 Germany	10	0.9						
57 other countries	†	†	59 other countries	†	†	6 other countries	†	†
Total (70 countries)	1055	100.0	Total (69 countries)	1020	100.0	Total (8 countries)	34	100.0

**LPNs 2010**

<b>Total</b>			<b>Urban</b>			<b>Rural</b>		
<b>Graduation Country</b>	<b>Count</b>	<b>%</b>	<b>Graduation Country</b>	<b>Count</b>	<b>%</b>	<b>Graduation Country</b>	<b>Count</b>	<b>%</b>
608 Philippines	774	35.2	608 Philippines	765	36.0	840 United States	27	37.5
826 United Kingdom	357	16.2	826 United Kingdom	343	16.1	826 United Kingdom	14	19.4
840 United States	219	10.0	840 United States	192	9.0	608 Philippines	9	12.5
356 India	161	7.3	356 India	160	7.5			
642 Romania	55	2.5	642 Romania	55	2.6			
156 China	50	2.3	156 China	50	2.4			
566 Nigeria	39	1.8	566 Nigeria	38	1.8			
616 Poland	39	1.8	616 Poland	38	1.8			
344 Hong Kong	36	1.6	344 Hong Kong	36	1.7			
328 Guyana	32	1.5						
643 Russia	29	1.3						
388 Jamaica	26	1.2						
586 Pakistan	25	1.1						
288 Ghana	21	1.0						
93 other countries	†	†	97 other countries	†	†	13 other countries	†	†
Total (107 countries)	2197	100.0	Total (106 countries)	2125	100.0	Total (16 countries)	72	100.0

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

Data Source: CIHI NDB.

**Appendix 19**
**Principal Source Countries of the International Graduates in the Canadian RPN Workforce, 2003 and 2010**
**RPNs 2003**

Total			Urban			Rural		
Graduation Country	Count	%	Graduation Country	Count	%	Graduation Country	Count	%
826 United Kingdom	309	82.8	826 United Kingdom	282	82.9	826 United Kingdom	27	81.8
344 Hong Kong	41	11.0	344 Hong Kong	39	11.5	344 Hong Kong	†	†
36 Australia	8	2.1	36 Australia	7	2.1	36 Australia	†	†
528 Netherlands	7	1.9				372 Ireland (Eire)	†	†
						528 Netherlands	†	†
7 other countries	†	†	7 other countries	†	†	554 New Zealand	†	†
Total (11 countries)	373	100.0	Total (10 countries)	340	100.0	Total (6 countries)	33	100.0

**RPNs 2010**

Total			Urban			Rural		
Graduation Country	Count	%	Graduation Country	Count	%	Graduation Country	Count	%
826 United Kingdom	299	82.1	826 United Kingdom	272	82.2	826 United Kingdom	27	81.8
344 Hong Kong	15	4.1	344 Hong Kong	15	4.5	566 Nigeria	†	†
36 Australia	10	2.7	36 Australia	10	3.0	372 Ireland (Eire)	†	†
372 Ireland (Eire)	9	2.5	372 Ireland (Eire)	8	2.4	528 Netherlands	†	†
566 Nigeria	6	1.6				554 New Zealand	†	†
528 Netherlands	5	1.4				756 Switzerland	†	†
8 other countries	†	†	10 other countries	†	†			
Total (14 countries)	364	100.0	Total (14 countries)	331	100.0	Total (6 countries)	33	33.0

† Suppressed in accordance with CIHI's privacy policy; small cell size.

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.

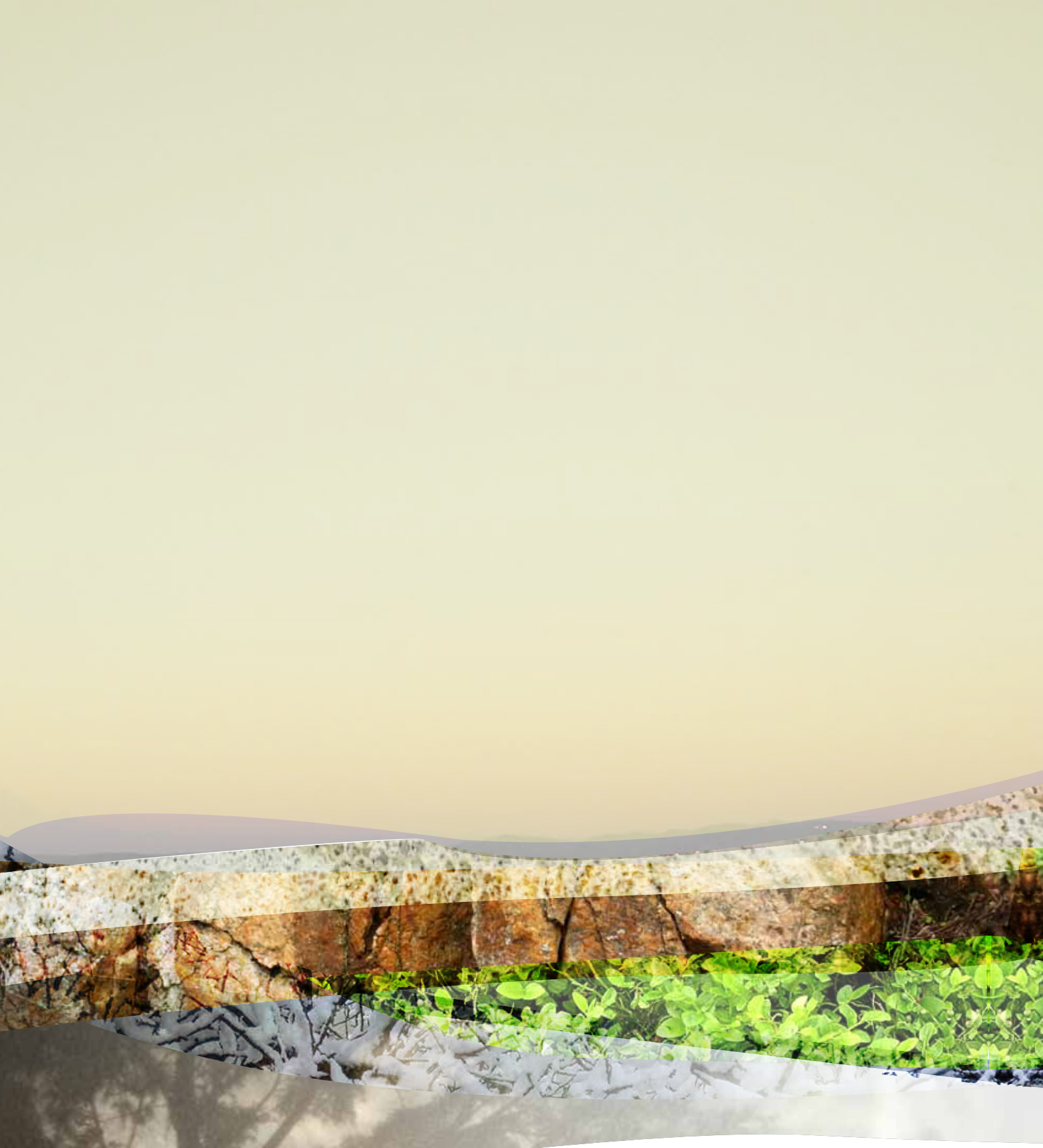
Data Source: CIHI NDB.

**Appendix 20**
**Non-migrants: Proportion (%) of the Regulated Nursing Workforce Working in the Province/Territory Where They First Graduated with Initial Nursing Education**

Registration Location	2003			2010		
	Total	Urban	Rural	Total	Urban	Rural
<b>RNs</b>						
N.L.	71.8	66.0	87.3	73.2	68.6	86.9
P.E.I.	70.3	67.1	82.9	71.1	65.8	87.8
N.S.	75.8	72.5	86.5	76.0	73.4	84.7
N.B.	76.4	76.9	88.6	79.0	78.2	82.8
Que.	93.7	†	†	94.3	94.2	95.9
Ont.	91.2	92.6	85.3	91.9	92.5	84.5
Man.	72.6	70.1	82.6	76.1	73.8	81.0
Sask.	66.7	64.1	77.5	70.9	69.1	79.4
Alta.	81.1	80.8	82.6	81.9	82.7	76.4
B.C.	90.9	91.8	81.8	91.1	91.9	81.5
N.W.T./Nun.	78.1	74.0	75.0	68.6	66.2	75.6
<b>NPs</b>						
N.L.	85.7	80.0	80.0	75.2	67.7	93.3
P.E.I.				40.0	33.3	
N.S.	62.5	33.3	20.0	67.7	66.7	70.0
N.B.	46.2	62.5	33.3	69.7	68.6	72.0
Que.				48.0	53.5	12.5
Ont.	95.6	97.4	89.1	93.0	94.2	87.0
Man.				61.1	60.0	58.1
Sask.				66.1	51.5	90.5
Alta.	85.4	85.7	83.3	79.8	84.1	47.8
B.C.				65.0	69.4	46.2
N.W.T.				66.7		28.6
<b>LPNs</b>						
N.L.	88.3	82.3	97.2	87.4	81.8	95.6
P.E.I.	92.0	91.0	95.1	89.8	90.3	88.2
N.S.	87.3	84.0	93.6	89.6	86.4	95.4
N.B.	93.0	91.6	95.8	92.9	92.0	94.8
Que.	0.0	0.0	0.0	97.7	97.7	97.9
Ont.	97.1	97.3	95.9	97.0	97.3	94.7
Man.	86.0	81.0	92.3	87.5	83.5	92.7
Sask.	84.8	82.4	90.3	89.5	88.4	92.0
Alta.	86.7	85.9	88.8	84.0	84.2	83.1
B.C.	94.9	95.2	91.6	95.6	96.1	91.0
Y.T.	53.5	55.6	12.5	69.8	81.1	0.0
N.W.T./Nun.	48.3	38.9	60.0	32.6	25.8	41.2
<b>RPNs</b>						
Man.	77.8	74.1	87.8	79.3	76.3	87.2
Sask.	71.5	73.2	63.9	74.7	76.3	66.3
Alta.	85.6	81.8	91.5	85.1	80.2	96.1
B.C.	96.8	97.3	83.9	96.5	96.8	88.6

† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.  
Data Source: CIHI NDB.





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