# Regulated Nurses, 2016

Report

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Unless otherwise indicated, this product uses data provided by Canada's provinces and territories.

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# Key findings

*Regulated Nurses, 2016* highlights current trends in nursing practice in Canada across a variety of supply, employment and demographic characteristics. This report looks at data for the 3 groups of regulated nursing professionals: registered nurses (RNs, including nurse practitioners, or NPs), licensed practical nurses (LPNs) and registered psychiatric nurses (RPNs).

**Growth in the supply of regulated nurses has slowed down, with RNs/NPs showing the lowest growth**

In 2016, there were 421,093 regulated nurses with an active licence to practise in Canada, an increase of 1.3% between 2015 and 2016. With the exception of 2014, this was the slowest growth rate since the Canadian Institute for Health Information (CIHI) began collecting data for all regulated nursing professions in 2002. Between 2015 and 2016, the supply of LPNs grew by 2.8% (from 113,367 to 116,491), that of RPNs grew by 1.6% (from 5,766 to 5,859) and that of RNs/NPs grew by 0.7% (from 296,731 to 298,743).

**The number of regulated nurses entering the profession exceeded the number not renewing registration**

In 2016, there was an inflow of 28,630 regulated nurses into the profession (those who registered in a province or territory where they had not registered the year before). This exceeded the outflow of 22,538 regulated nurses from the profession (those who failed to renew their registration in the same province or territory at the end of 2015). This resulted in a net gain of 6,092 regulated nurses, which was 2,271 fewer than the net gain of 2015.

**Growth in the number of LPNs who are employed has led to a shift in the proportion of regulated nurses across all settings.**

The distribution of regulated nurses in various care settings shifted between 2007 and 2016, as the number of LPNs employed across all settings increased.

- In hospitals, the proportion of LPNs employed increased from 16.3% to 21.2%, while the proportion of RNs/NPs employed declined from 83.7% to 78.8%.

- In nursing homes/long-term care facilities, the proportion of LPNs employed increased from 50.3% to 56.3%, while the proportion of RNs/NPs employed declined from 49.7% to 43.7%.

- In community settings, the proportion of LPNs employed increased from 13.5% to 24.1%, while the proportion of RNs/NPs employed declined from 86.5% to 75.9%.

# More information

The following companion products to the *Regulated Nurses, 2016* summary report are available on CIHI's website:

- *Regulated Nurses, 2016: Canada and Jurisdictional Highlights* (.pdf)
- *Regulated Nurses, 2016: Chartbook* (.pptx) (available upon request)
- *Regulated Nurses, 2016: RN/NP Data Tables* (.xlsx)
- *Regulated Nurses, 2016: LPN Data Tables* (.xlsx)
- *Regulated Nurses, 2016: RPN Data Tables* (.xlsx)
- *Regulated Nurses, 2016: Indicators* (.xlsx)
- *Regulated Nurses, 2016: Methodology Guide* (.pdf)

Information and analyses on 30 other health professions in Canada are also available.

Feedback and questions are welcome at hhr@cihi.ca.

# About this report

*Regulated Nurses, 2016* is the latest edition of CIHI's annual report on the supply, employment and demographic trends of Canada's regulated nursing workforce.

Changes to this report and its companion products have been made in response to feedback received from health human resources (HHR) stakeholders. Some of the improvements include

- Expanded data tables in Excel to enable readers to conduct their own analyses;
- Provincial/territorial highlights and health region analyses to provide comprehensive information on jurisdiction-specific trends;
- Graphs available in PowerPoint so readers can "grab and go";
- More contextual information to position nursing trends within the broader health care workforce; and
- More details regarding evolving roles and work settings for regulated nurses in Canada.

To ensure that our work reflects priority needs, we invite our readers to join the discussion using CIHI's Facebook page, CIHI's Twitter account or email.

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# Regulated professions

There are 3 regulated nursing professions in Canada. Each province and territory has its own legislation governing nursing practice, as well as its own body that regulates and licenses its members.

Below is a brief description of each type of regulated nursing provider.

**Registered nurses** (RNs), including nurse practitioners (NPs), are self-regulated health care professionals who work both autonomously and in collaboration with others to enable individuals, families, groups, communities and populations to achieve their optimal levels of health. At all stages of life, in situations of health, illness, injury and disability, RNs deliver direct health care services, coordinate care and support clients in managing their own health. RNs contribute to the health care system through their leadership across a wide range of settings in practice, education, administration, research and policy. RNs are currently regulated in all 13 provinces and territories.

> **Nurse practitioners** (NPs) are RNs with additional educational preparation and experience who possess and demonstrate the competencies to autonomously diagnose, order and interpret diagnostic tests, prescribe pharmaceuticals and perform specific procedures within their legislated scope of practice. NPs are currently regulated in all 13 provinces and territories.

**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 are currently regulated in all 13 provinces and territories.

**Registered psychiatric nurses** (RPNs) work both autonomously and in collaboration with clients and other health care team members to coordinate health care and provide client-centred services to individuals, families, groups and communities. RPNs focus on mental and developmental health, mental illness and addictions, while integrating physical health and utilizing bio-psycho-social and spiritual models for a holistic approach to care. RPNs are currently regulated in the 4 Western provinces (Manitoba, Saskatchewan, Alberta, British Columbia) and Yukon.

# Notes to readers

Throughout this report,

- The term *regulated nurses* is used to describe the 3 groups of regulated nursing professionals as a whole: RNs (including NPs), LPNs and RPNs.
- The term *nursing* refers collectively to Canada's 3 regulated nursing professions, unless otherwise specified.
- The term *supply* refers to all regulated nurses who are eligible to practise in the given year (including those employed and those not employed at the time of registration).
- The term *workforce* refers to only those regulated nurses who were employed at the time of annual registration.

Unless otherwise noted and/or referenced, data and information are from the nursing component of CIHI's Health Workforce Database. At present, this data set excludes RPNs in Yukon and LPNs in Nunavut. More information regarding the collection and reporting of this data is available in the companion document *Regulated Nurses, 2016: Methodology Guide*.

# Overview

This report explores how the regulated nursing workforce evolved over the 10-year period from 2007 to 2016 and considers some of the broader transformations that have occurred across the Canadian economic and health care landscapes.

Health care professionals are the foundation of a health care system. Regulated nurses represent the single largest group of health care professionals in Canada, accounting for almost half[i] of the health workforce.[1] Given the impact regulated nurses have on health care delivery, it is important to monitor and understand the factors that influence their supply, such as

- The accessibility of nursing education programs, including the number of seats and program locations;
- The flow of regulated nurses (the outmigration of new graduates, the recruitment of internationally educated regulated nurses, the mobility of regulated nurses within and across Canadian jurisdictions and the migration of regulated nurses out of Canada); and
- The national and jurisdictional economies that affect public spending on health care.

Regulated nurses play an important role in health care delivery across Canada. They work independently or in collaboration with other members of a health care team, providing services to individuals of all ages, their families and their communities. Understanding the trends in the supply of regulated nurses and the factors influencing the nursing labour market provides needed insight for effective planning and management of health care delivery across the country.

This year's analysis highlights changes in the trends of Canada's nursing supply and workforce over 10 years, including

- The growth in the supply of regulated nurses;
- Age distribution trends among regulated nurses;
- The evolving flow of regulated nurses in and out of nursing practice; and
- Characteristics of regulated nurses across employment settings.

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i.  The proportion of all nursing occupations (including nursing aides) among all health occupations is based on Statistics Canada's Labour Force Survey. When only regulated nurses are analyzed, the proportion changes to 31.5%.

# Canada's regulated nursing supply

In 2016, there were 421,093 regulated nurses with an active licence to practise in Canada. The supply of regulated nurses grew by 1.3% between 2015 and 2016. With the exception of 2014, this was the slowest growth observed since 2002, when CIHI began collecting data for all regulated nursing professions. The supply of regulated nurses comprised 298,743 RNs (including 4,832 NPs), 116,491 LPNs and 5,859 RPNs (Figure 1).

The growth (0.7%) in the supply of RNs/NPs slowed in 2016, compared with the growth of 1.2% in 2015. The growth in the supply of LPNs was 2.8%, almost half of the 5.0% growth seen in 2015. The supply of RPNs increased by 1.6% in 2016, which was comparable to the growth observed in 2015.

**Figure 1**  Cumulative growth in the supply of regulated nurses, Canada, 2007 to 2016
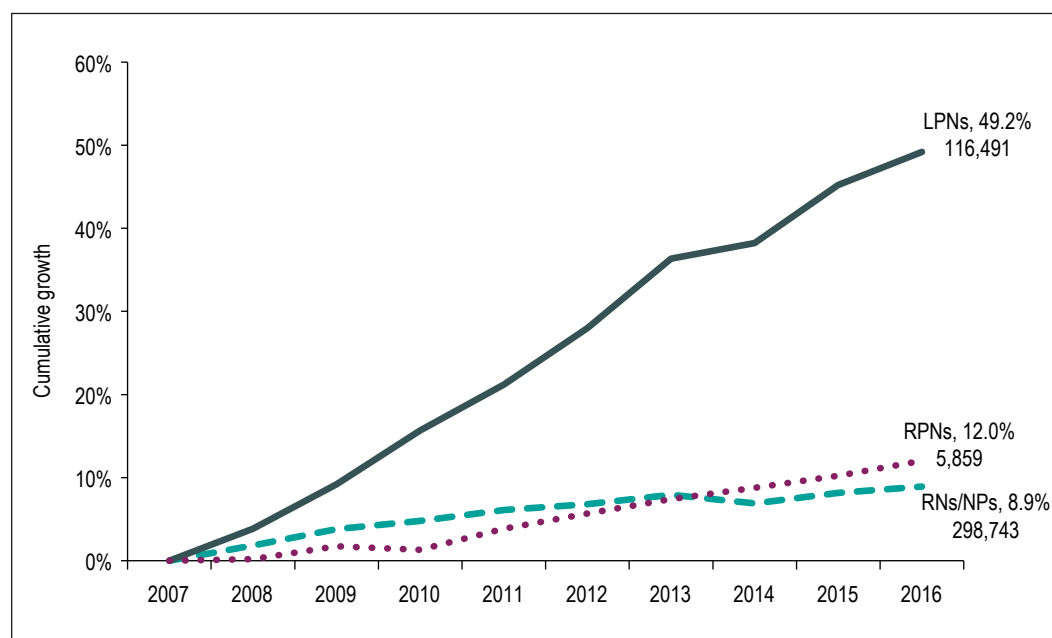


**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

While the cumulative growth in the supply of regulated nurses (17.8%) between 2007 and 2016 outpaced the growth of the general population (10.3%), it was lower than the growth of the labour force working in the health sector (23.2%).[2]

One of the key factors influencing the growth in the supply of regulated nurses is the number of new graduates[ii] obtaining a licence to practise in Canada.

**Registered nurses:** From 2007 to 2016, the number of new RN graduates holding an active licence to practise registered nursing in Canada increased at an average annual rate of 2.8%, reaching 10,022 in 2016. While the growth rate slowed since 2012, the number of new RN graduates obtaining a licence to practise in Canada also declined in recent years. In 2013, there were 11,044 new RN graduates.

**Licensed practical nurses:** While the average annual growth in the number of new LPN graduates was 2.1% in 2016, a rate comparable to that seen in 2007, it was much lower than in the intervening years, when the growth rate ranged from 4.3% to 9.2%. In 2016, there were 7,939 new LPN graduates licensed to practise, compared with 6,580 in 2007 and the peak of 10,383 in 2013.

**Registered psychiatric nurses:** In 2016, there were 476 new RPN graduates licensed to practise psychiatric nursing in the 4 Western provinces (Manitoba, Saskatchewan, Alberta and British Columbia). Between 2007 and 2016, the number of new RPN graduates increased at a rate of 7.9% and almost doubled in number (to 476 in 2016 from 241 in 2007).

**Internationally educated nurses:** Monitoring the trend in the supply of internationally educated nurses (IENs) is another important factor in understanding changes in the supply of regulated nurses. While the proportion of IENs increased slightly from 2007 (6.7%, 23,764) to 2016 (8.1%, 33,789), the average annual growth over the same period declined to 4.0% in 2016, from a high of 8.2% in 2008.

In 2016, there were 26,710 internationally educated RNs/NPs in Canada. While the proportion remained relatively unchanged (9.0%), the average annual growth had slowed to 2.2%, down from 8.4% in 2008.

The proportion of internationally educated LPNs increased 3.9 percentage points to 5.8% (6,706) between 2007 and 2016. The average annual growth was 18.2% over the same period. Growth among internationally educated LPNs had rested between 17.8% and 21.1% since 2009, and the supply quadrupled from 1,492 in 2007 to 6,706 in 2016.

In 2016, internationally educated RPNs accounted for 6.8% (373) of the supply of RPNs in Canada. This proportion has been stable since 2007.

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ii.  New graduates are defined as those regulated nurses obtaining a licence to practise within 2 years of graduation. For example, all regulated nurses with a year of graduation of 2015 and/or 2016 will be counted as new graduates for 2016.

# Flow of regulated nurses

Changes in the nursing supply reflect the number of registrants entering (inflows) and leaving (outflows) the profession. Analyzing inflows and outflows reveals how the nursing supply is changing over time.

*Inflow* occurs when a regulated nurse registers to practise in a jurisdiction in which she or he did not register the previous year. Inflow is calculated by dividing the number of new registrants — regulated nurses who were not registered to practise nursing in the same province or territory the year before — by the total number of registrants in the same year. Inflow can include new graduates, regulated nurses who migrate in from other Canadian jurisdictions or foreign countries and those who return to the workforce after extended leave (such as for family responsibilities or further education).

*Outflow* occurs when a regulated nurse fails to renew her or his registration in a jurisdiction the following year. Outflow is calculated by dividing the number of registrants who did not renew their licence to practise nursing in the same province or territory by the total number of registrants in the same year. Outflow is influenced by a number of factors,[iii] and these factors will change over time. For those regulated nurses age 60 and older, failing to renew their registration may be a signal that they have retired. For younger regulated nurses — particularly those early in their career — reasons for failing to renew registration could include choosing a better or different job opportunity outside of their province or territory, taking parental leave and fulfilling family responsibilities, returning to school for additional education or leaving the profession.

## Inflow/outflow for all regulated nurses

In 2016, a total of 28,630 regulated nurses registered to practise in a province or territory in which they had not registered in the previous year.[iv] This inflow represents 7.3% of the 2016 regulated nursing supply (Figure 2).

After the 2015 registration year, 22,538 regulated nurses failed to renew their registration in the same province or territory. This outflow represents 5.8% of the 2015 regulated nursing supply (Figure 2). As a result, there was a net gain of 6,092 regulated nurses in 2016. This followed a net gain of 8,363 regulated nurses in 2015.

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iii. Regulated nurses, like others in the labour force, consider many factors when choosing where to live and work. Factors might include social, political, economic, environmental and familial issues.
iv. LPNs in Quebec are excluded from the inflow and outflow historical trending, as data was not available for all registration years.

**Figure 2**   Inflow and outflow of regulated nurse supply, Canada, 2006 to 2016
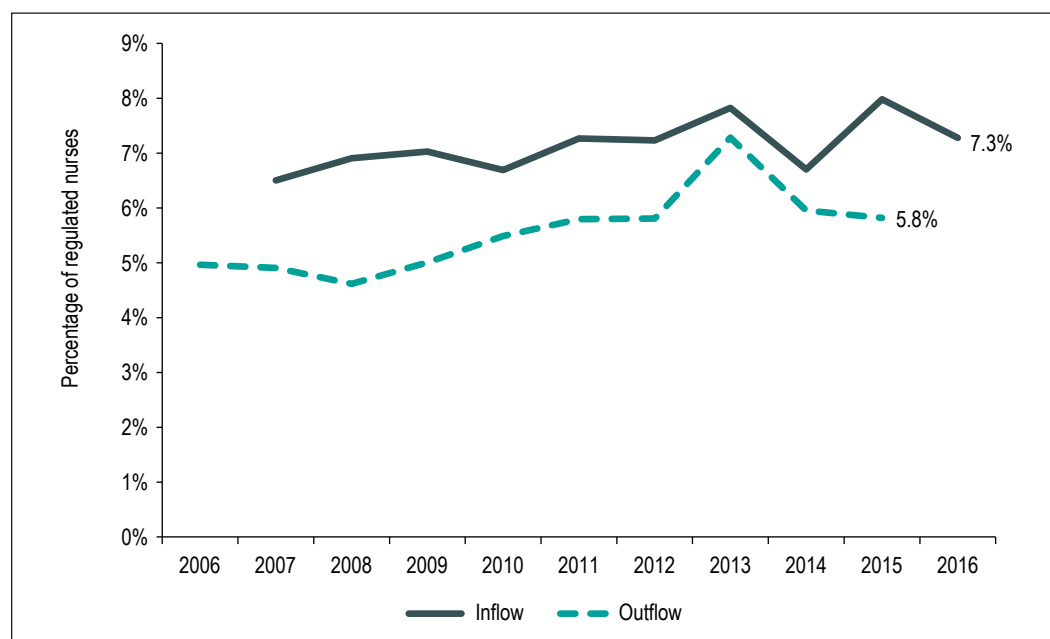


**Notes**
In 2016, the Association of Registered Nurses of Newfoundland and Labrador provided aggregate counts for inflow/outflow/renewal numbers containing 95 secondary registration numbers.
Excludes LPNs in Quebec, where inflow and outflow trending is not available for all registration years.
**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

Of the regulated nurses contributing to the inflow in 2016, 70.4% were younger than 35 and 67.9%[v] had graduated in the last 5 years. About half (49.2%) of the outflow after 2015 were regulated nurses age 55 and older, while 27.8% were younger than 35. While the literature suggests that new graduates and younger nurses are more mobile than mid- and late-career nurses,[3, 4] the majority of regulated nurses (90.7%) in 2016 had a licence to practise in the jurisdiction where they completed their entry-to-practice nursing education. This tendency was higher among LPNs (94.6%) than among RPNs (87.3%) and RNs/NPs (89.3%) who were licensed to practise in the jurisdiction where they completed their entry-to-practice education.

An unknown percentage of movement each year is caused by regulated nurses who migrate from one province or territory to another. For the most recent year, these individuals would be considered an outflow in the province or territory they left in 2015 and an inflow in the province or territory they relocated to in 2016.

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[v]   Excludes RNs/NPs in Newfoundland and Labrador and LPNs in Quebec, where inflow trending is not available for all registration years.

# Inflow and outflow rates by nursing profession

Across all nursing professions, the inflow of regulated nurses in the 2016 registration year exceeded the outflow of regulated nurses after the 2015 registration year.

Among RNs/NPs, the rates of inflow and outflow have run parallel for a number of years. In recent years, we've seen these draw closer together and a narrowing in the gap (0.6 percentage points) between the flows. While the inflow (19,124) of RNs/NPs in 2016 was greater than the outflow (17,107) after 2015, the flow of RNs/NPs into and out of the profession has slowed down (Figure 3).

**Figure 3**  Inflow and outflow of registered nurse supply, Canada, 2006 to 2016
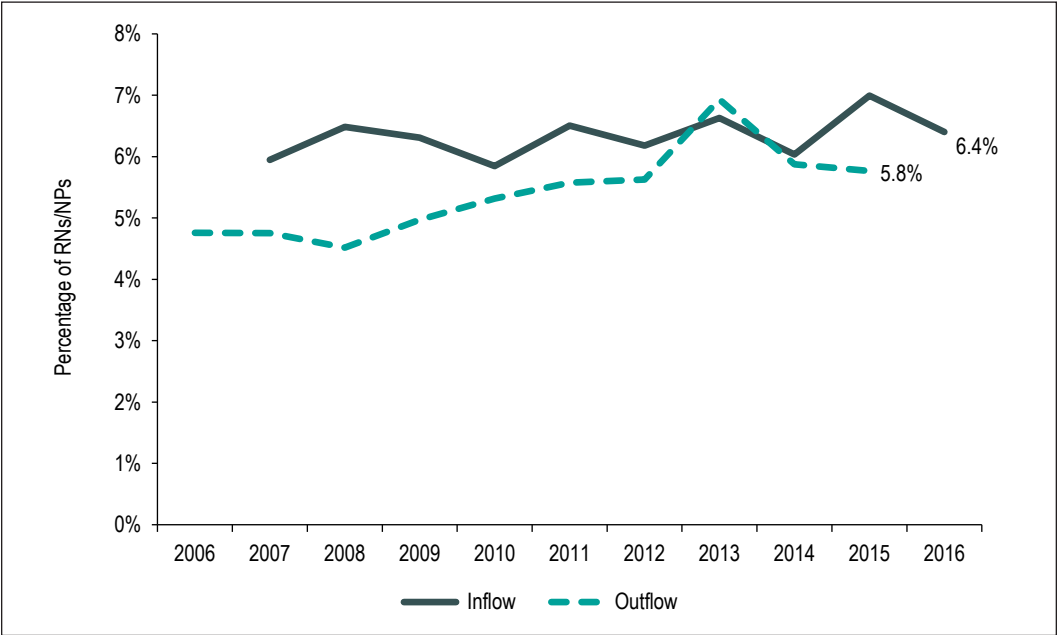


**Note**
In 2016, the Association of Registered Nurses of Newfoundland and Labrador provided aggregate counts for inflow/outflow/renewal numbers containing 95 secondary registration numbers.
**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

Many factors can influence a decline in both the inflow and outflow of RNs/NPs and result in fluctuating trends over time. One important factor is the number of new RN graduates[vi] (Figure 4) who obtain a licence to practise nursing in Canada. Since 2013, there has been a decline in the number of new RN graduates obtaining a licence to practise in Canada, with average annual growth of -3.2%, compared with 2.8% since 2007. Trends among new graduates may be influenced by various factors, including changes in legislation (e.g., Ontario's graduate guarantee), the number of seats and graduates from entry-to-practice nursing programs, and regulatory and licensure requirements (e.g., the introduction of the RN National Council Licensure Examination in January 2015).

**Figure 4**   New RN graduates licensed to practise registered nursing, Canada, 2007 to 2016
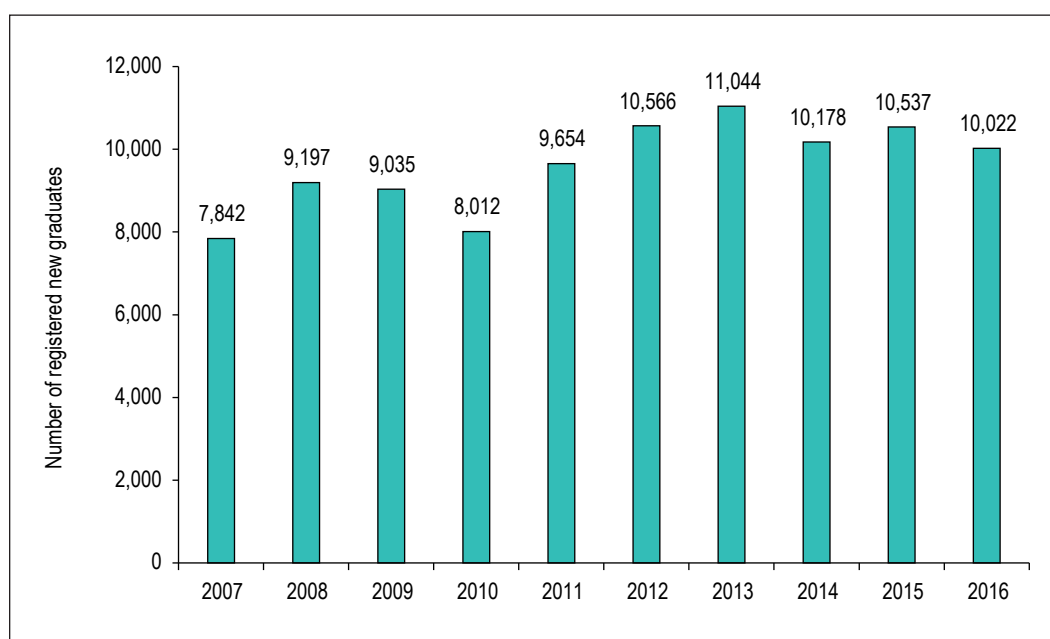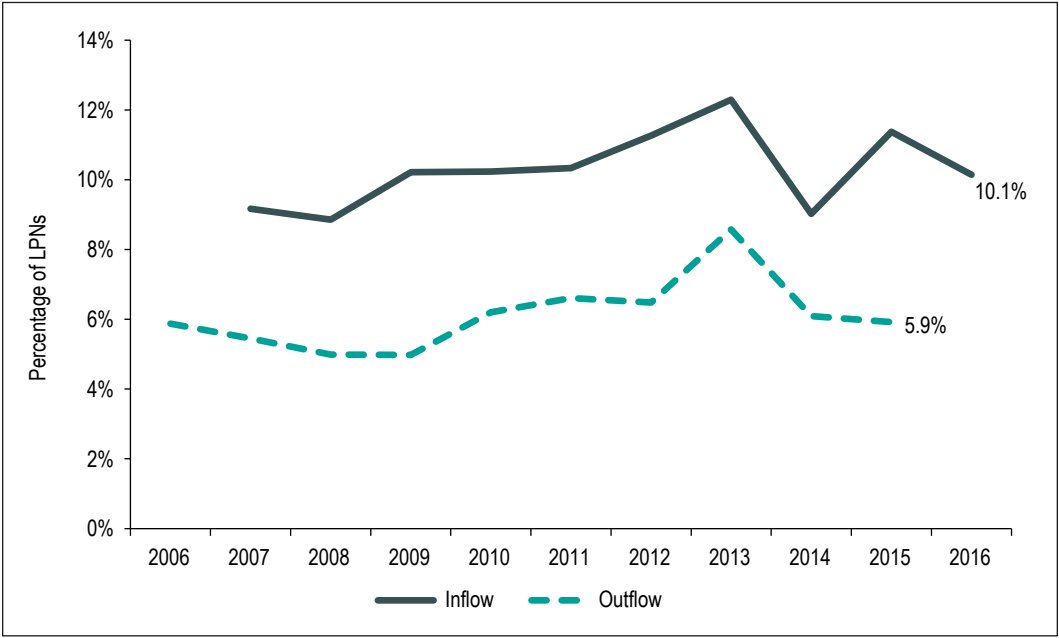


**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

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vi.   New RN graduates are defined as those RNs obtaining a licence to practise within 2 years of graduation. For example, all RNs with a year of graduation of 2015 and/or 2016 will be counted as new graduates for 2016.

LPNs show a wider gap (4.2 percentage points) between inflow and outflow rates (Figure 5). While the 2016 inflow (8,993) exceeded the 2015 outflow (5,011) of LPNs, the LPN inflows declined compared with the previous year (9,628). LPNs younger than 35 accounted for the largest proportion (68.7%) of the inflow; more than three-quarters (78.5%) of all inflows were LPNs who graduated between 2012 and 2016.

While the outflow of LPNs slowed after 2015, the overall number of LPNs leaving a jurisdiction was greater than in the previous year (5,011 in 2015 compared with 4,868 in 2014). The outflow after 2015 was similar among LPNs younger than 35 (35.1%) and those age 55 and older (34.6%). Outflow can be influenced by a number of factors and may suggest higher rates of mobility among younger LPNs. For those age 55 and older, outflow may be a reflection of retirement among late-career LPNs.

**Figure 5**   Inflow and outflow of licensed practical nurse supply, Canada, 2006 to 2016



**Note**
Excludes LPNs in Quebec, where inflow and outflow trending is not available for all registration years.
**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

In 2016, the inflow of RPNs (513) was greater than the outflow (420) (Figure 6). More than half (51.7%) of all outflows were RPNs age 55 and older. Close to 70% of all inflows in 2016 were RPNs younger than 35; 77.0% had graduated in the last 5 years (between 2012 and 2016). While the gap between the inflow and outflow increased slightly, the difference between the trends remained quite narrow (1.5 percentage points), suggesting that fewer RPNs may be available to fill future vacancies in the health care system.

**Figure 6**   Inflow and outflow of registered psychiatric nurse supply, Canada, 2006 to 2016
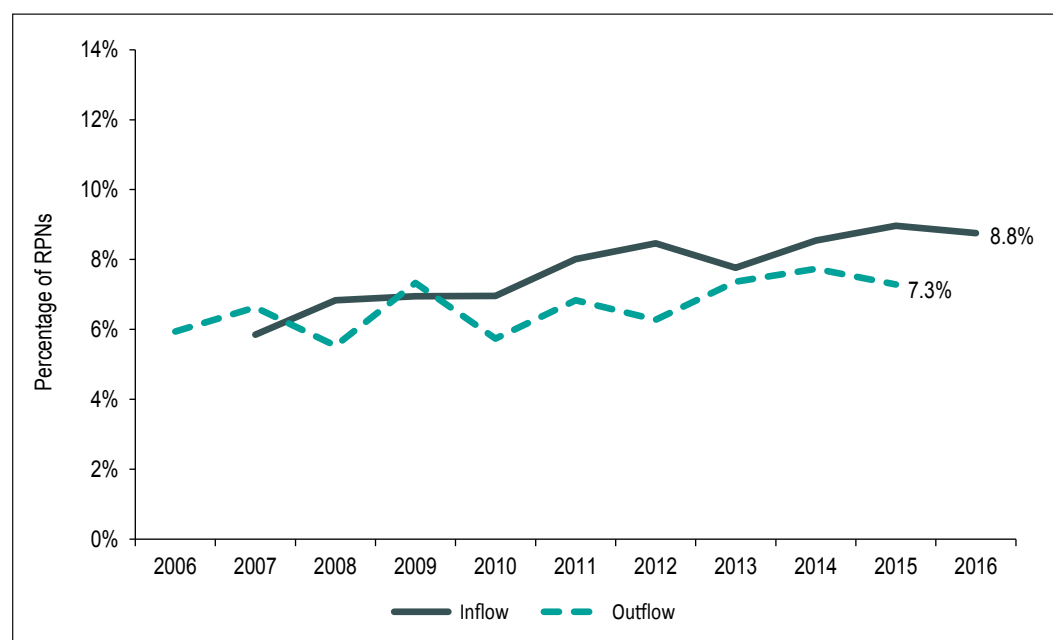


**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

# Age distribution of regulated nurses

Since 2007, there has been an overall increase in the proportion of regulated nurses younger than 35 (Figure 7). Over the same period, the proportion of regulated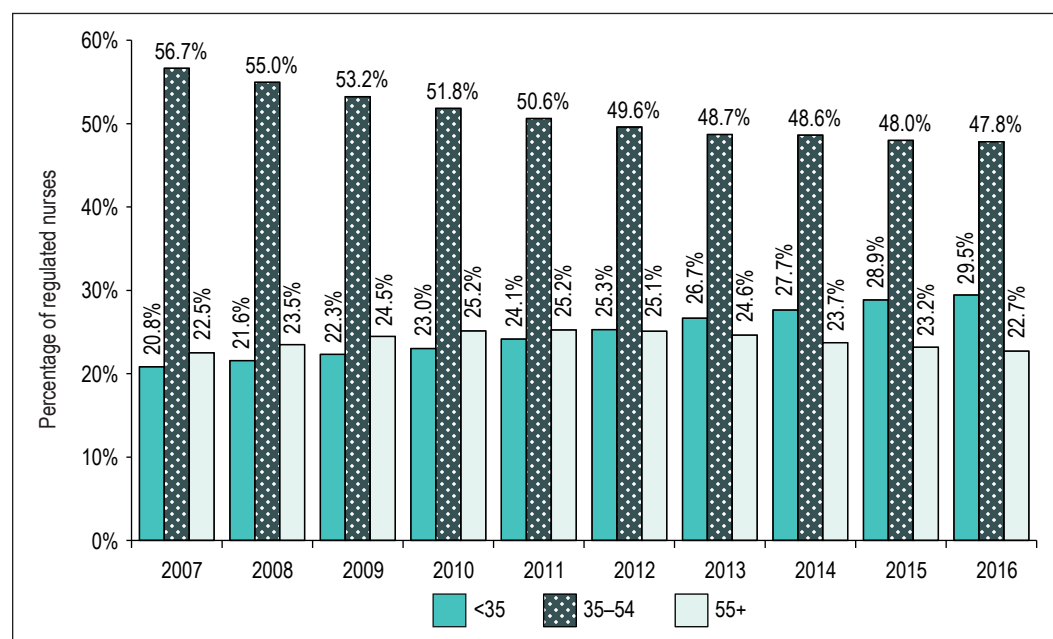 nurses age 35 to 54 declined by 8.9 percentage points, accounting for less than half (47.8%) of the supply of regulated nurses in Canada in 2016.

**Figure 7**    Regulated nurses by age group, Canada, 2007 to 2016



**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

The decline of regulated nurses age 35 to 54 was observed across all nursing professions. This shift is not unexpected; the supply trend of regulated nurses demonstrates the slowing of growth between 1993 and 2002, reflecting a period of fiscal restraint in health care spending across Canada. It is an important trend to monitor, as mid-career nurses play an integral role within the nursing workforce, often working autonomously while simultaneously supporting older regulated nurses and mentoring new nurses in the workforce.[5, 6]

While the overall number of regulated nurses age 55 and older increased from 80,501 in 2007 to 95,633 in 2016, their proportion of the overall supply declined in the most recent years (from more than 25% in 2012 to 22.7% in 2016). This shift in the demographics for regulated nurses may be attributed to an increase in the number of younger nurses entering the profession and to an increased number of late-career nurses retiring.

# Employment status

The employment status of regulated nurses in 2007 and 2016 is highlighted in Table 1. The regulated nursing workforce — those nurses who indicated they were employed in nursing at the time of registration — grew at an average annual rate of 2.0% over the 10 years shown. While the annual rate of growth was 2.6% between 2007 and 2008, it remained between 1.9% and 2.3% since that time.

**Table 1**  Proportion of regulated nurses by employment status, Canada, 2007 and 2016

| Employment status | Regulated nurses, 2007 | Regulated nurses, 2016 | RNs/NPs, 2007 | RNs/NPs, 2016 | LPNs, 2007 | LPNs, 2016 | RPNs, 2007 | RPNs, 2016 |
|---|---|---|---|---|---|---|---|---|
| **Supply** | 357,584 | 421,093 | 274,274 | 298,743 | 78,080 | 116,491 | 5,230 | 5,859 |
| **Employed in nursing (workforce)** | 93.1% | 94.1% | 94.1% | 95.6% | 89.3% | 90.2% | 98.0% | 95.5% |
| **Employed in other than nursing** | 2.1% | 0.8% | 1.8% | 0.5% | 3.1% | 1.5% | 0.0% | 1.8% |
| **Not employed** | 3.2% | 2.6% | 3.1% | 2.1% | 3.8% | 4.0% | 0.5% | 1.3% |
| **Not stated** | 1.7% | 2.5% | 1.1% | 1.8% | 3.8% | 4.4% | 1.5% | 1.3% |

**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

In 2016, almost 25,000 regulated nurses who had an active licence to practise in Canada were not included in the nursing workforce because they were employed in a field other than nursing, they were not employed or their employment status was not known.[vii]

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[vii.] *Employed in other than nursing* and *not employed* include regulated nurses who may or may not be seeking employment in nursing.

# Full-time employment

CIHI's definition of full-time employment is the regulated nurse's official status with her or his primary employer, not a reflection of the number of hours worked or number of positions held. It is quite likely that some regulated nurses work the equivalent of full-time hours through a combination of multiple positions with 1 or more employers. In this analysis, only those employed on a full-time basis with their primary employer are considered full time.

While rates of full-time employment[viii] changed very little over the decade studied, there were variations across the nursing professions. In 2016, the proportion of RNs/NPs and RPNs with full-time employment was about 60% (60.7% and 60.8%, respectively). However the proportion of RPNs in full-time positions had declined by 7 percentage points since 2007. NPs had the highest rate of full-time employment (80.0%) while LPNs had the lowest, with just less than half (48.0%) employed full time (Figure 8).

**Figure 8**   Rates of full-time employment among regulated nurses, Canada, 2007 and 2016
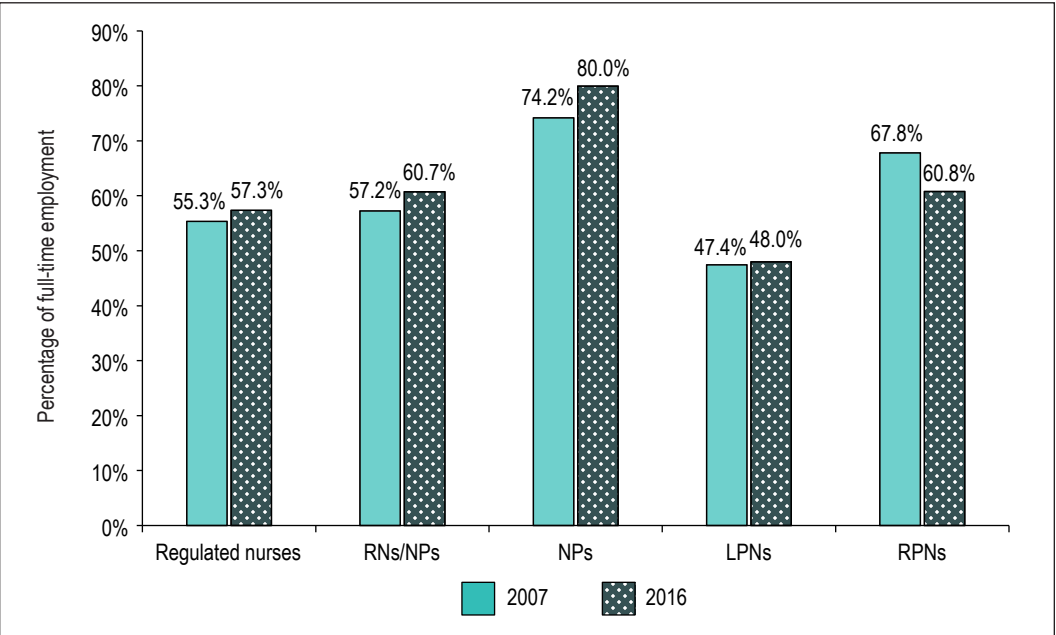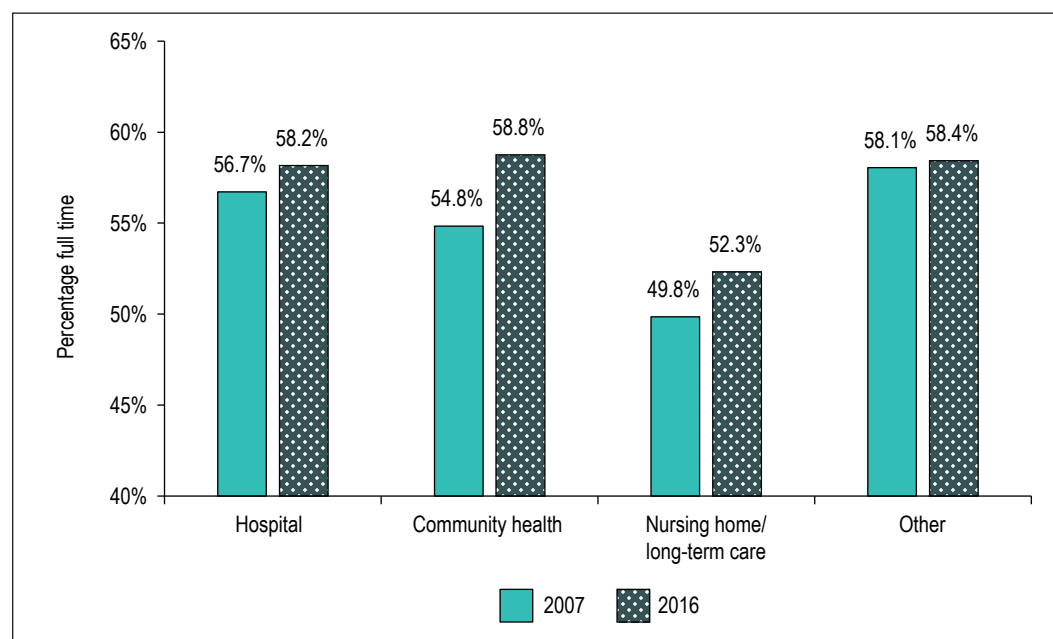


**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

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viii.   The full-time employment analysis evaluates the primary employment status for all regulated nurses regardless of their position, place of work or area of responsibility. The full-time employment rate is adjusted by excluding records with unknown employment status.

Across all regulated nursing professions, a higher proportion of IENs (64.3%) were employed in full-time positions than Canadian-educated nurses (56.8%). The trends among IENs are important to consider; however, the relative size of this workforce (33,789 or 8.1% of all regulated nurses) in contrast to that of Canadian-educated nurses (385,120 or 91.9% of all regulated nurses) should be considered when interpreting this data.

Across employment settings, the proportion of regulated nurses working full time also varied. In the community and hospital settings, the proportion of nurses employed full time was higher (58.8% and 58.2%, respectively) compared with those working in nursing home/long-term care settings (52.3%) (Figure 9).

**Figure 9** Full-time employment rates of regulated nurses, by place of work, Canada, 2007 and 2016



**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

The variation across employment settings can be for many reasons. While the availability of full-time positions is one factor, patient acuity, models of care and individual nurse preference[ix] should also be considered.

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ix. Regulated nurses, like other professionals, may choose to work on a part-time or casual basis to increase their work–life balance, to gain work experience in more than one position or setting, or to participate in continuing education, or for other social, political, economic, environmental or familial issues.[7, 8]

# Place of employment

Health care across Canada is provided by a diverse group of health care providers, including regulated nurses.[9] Increasingly, interprofessional collaboration is the foundation of care models, with each member of the team working to the full scope of practice.[9] Examining the distribution of regulated nurses across health care settings begins to shed light on changes in the models of care and the mix of health care providers delivering care.

## Interprofessional collaboration

Much attention is being paid to optimizing the distribution of health care providers in an effort to provide equitable access to health care for all Canadians. Before the 1980s, most patient care was provided by regulated nurses; some supportive assistance was provided by orderlies and other unregulated health care providers.[10] Over time, models of care have shifted with the introduction of other health care providers, including an increased reliance on allied health and unregulated health care workers supporting the front-line delivery of care.[10] Regulated nurses are integral members of interprofessional teams.

Models of care based on interprofessional collaboration focus on optimizing the role of each team member. These models stress the importance of each team member leveraging his or her expertise and working together towards common goals to meet patient needs.[9] While the organization of interprofessional teams varies considerably across provinces, territories, health regions and health care settings, the adoption of these models is occurring across Canada.

To understand the context behind the shifting trends among regulated nurses, it is important to consider broader factors influencing change across health care settings. Macro-level factors such as the economy and population demographics should be considered.

In 2016, 16.5% of the Canadian population was age 65 and older. It is anticipated that seniors will account for one-quarter of the Canadian population by 2036.[11, 12] As Canadians live longer, their health care needs are changing, influencing shifts in health care delivery — shorter hospital stays, more outpatient treatment and reliance on home care services, and an increasing need for long-term care.

These trends challenge health system planners and decision-makers as they balance changes in service delivery while continuing to provide a level of service and care that considers access, quality and appropriateness alongside the cost of delivering care.

Like other health care providers, regulated nurses are employed in a variety of practice settings.[x] Between 2007 and 2016, the overall proportion of regulated nurses employed in each setting (hospital, community and nursing home/long-term care) remained relatively unchanged. In 2016, 58.6% of regulated nurses were employed in a hospital setting, 15.4% in each of community and nursing home/long-term care settings and 10.6% in other settings.[xi] However, looking at the mix of regulated nurses in each setting highlights shifts that are occurring.

# Hospitals

While hospitals remain the top location of employment across the regulated nursing professions, the mix of nurses has shifted. The proportion of RNs/NPs employed in a hospital setting declined 4.9 percentage points since 2007, reaching 78.8% in 2016. During the same time period, the proportion of LPNs employed in a hospital increased to 21.2% from 16.3%.[xii] In the Western provinces (Manitoba, Saskatchewan, Alberta and British Columbia) the proportion of RPNs employed in hospitals remained unchanged at 3.5% of the nursing workforce in 2016.

Examining the changing mix of providers in hospital alongside hospital expenditures helps to understand the shifts. In 2014 (the most recent year of actual expenditure data available), hospital expenditures in Canada experienced the lowest rate of growth since the late 1990s, reflecting restraints of provincial and territorial budgets. As a result, hospitals have responded by changing how care is being delivered.[13]

Compensation accounts for more than 60% of hospital budgets and continues to be a significant cost driver.[13] Hospitals are managing the growth in health personnel and wage rates as the demand for services continues to rise. In addition, less-complex cases, once treated as inpatients, are increasingly treated on an outpatient basis, leading to an increase in the complexity of both inpatients and outpatients.[13] This has led to a large overall increase in the number of ambulatory and community visits, while inpatient activity has seen only modest growth.[13]

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**x.** The data element Place of Work is reported using 4 categories: *hospital*, *community health*, *nursing home/long-term care (LTC) facility* and *other place of work*. *Hospital* includes data from hospitals (general, maternal, pediatric, psychiatric), mental health centres and rehabilitation/convalescent centres. *Community health* includes data from community health centres, home care agencies, nursing stations (outposts or clinics), public health departments/units and physicians' offices/family practice units. *Nursing home/LTC* includes data from nursing homes/long-term care facilities and residential care facilities. *Other place of work* includes data from business/industry/occupational health offices, private nursing agencies/private duty, self-employed, educational institutions, associations/governments, correctional agencies and other places of work.

**xi.** Other settings include educational institutions, associations, government, business, industry and occupational health offices, as well as those who are self-employed.

**xii.** RPN numbers were removed from totals to calculate percentages as these nurses are employed only in Western Canada. CIHI receives data for Manitoba, Saskatchewan, Alberta and B.C.

# Nursing homes/long-term care facilities

The provision of care in nursing homes/long-term care facilities challenges health system planners as they look to balance health care service demands and costs in the context of an aging population. Before the 1980s, most patient care was provided by RNs/NPs and LPNs; some supportive assistance was provided by orderlies and other unregulated health care providers.[10] With the increase in demand for care, the role of unregulated health care providers has expanded from being supportive to providing front-line care.[10] It is important to recognize that unregulated health care providers play a substantive role in delivering care in Canada's long-term care setting.[10] Research indicates that up to 80% of the direct care to older Canadians living in long-term care facilities, or in their homes, is provided by unregulated health care providers.[10]

In 2016, 15.0% (60,514) of regulated nurses were employed in nursing home/long-term care settings. While RNs/NPs represented almost half of regulated nurses employed in these settings in 2007 (49.7%), the proportion decreased 6 percentage points, to 43.7% in 2016. Over the same period, the proportion of LPNs increased 6 percentage points to 56.3% in 2016 (Figure 10). For the Western provinces (Manitoba, Saskatchewan, Alberta and British Columbia), the proportion of RPNs declined from 7.7% in 2007 to 3.5% in 2016.

**Figure 10** Proportion of RNs/NPs and LPNs employed in nursing home/long-term care settings, Canada, 2002 to 2016
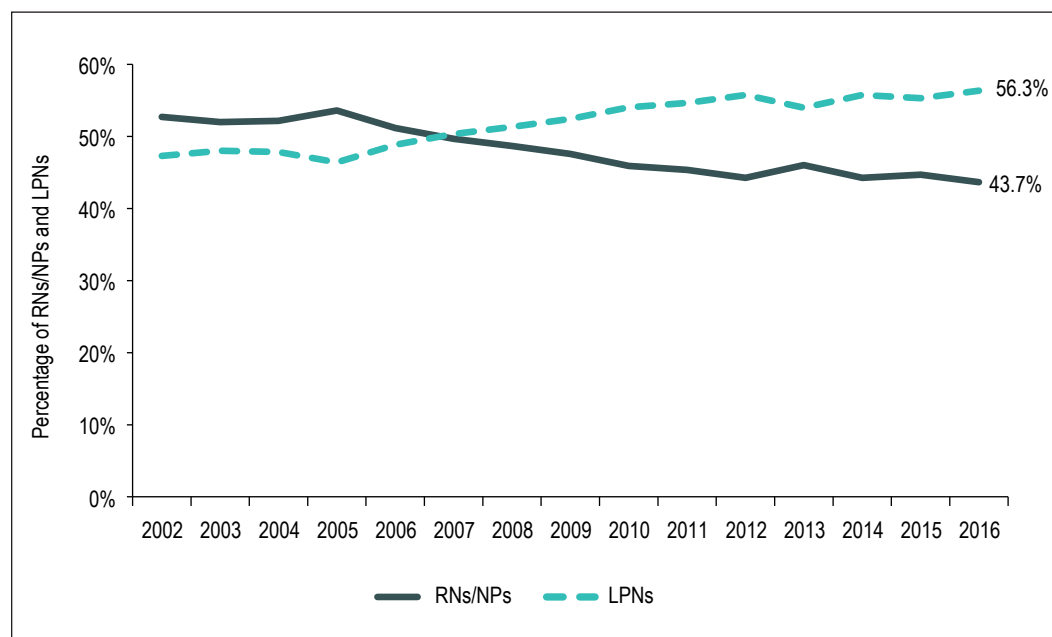


**Note**
Data for RPNs is available only for Manitoba, Saskatchewan, Alberta and B.C. and is therefore excluded from the above figure, which is a representation of all of Canada.
**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

## Community settings

While the proportion of regulated nurses employed in community settings remained relatively stable (14.8% in 2007 compared with 15.4% in 2016), this setting experienced the largest increase in average annual growth rates (2.4% compared with 1.9% in hospital settings and 0.9% in nursing home/long-term care settings) among regulated nurses: community settings grew by 11,563 regulated nurses from 2007 to 2016. Growth in community settings aligns with recent efforts by jurisdictions to move care into the community. Since 2007, the proportion of LPNs increased 10.5 percentage points to represent 24.1% of the nursing workforce employed in community settings in 2016. Over the same period, the proportion of RNs/NPs declined 10.5 percentage points, accounting for 75.9% of the nursing workforce employed in these settings in 2016. In the Western provinces (Manitoba, Saskatchewan, Alberta and British Columbia), the proportion of RPNs declined slightly from 8.3% in 2007 to 7.7% of regulated nurses employed in community settings in 2016.

# Areas of responsibility

Shifting trends in Canada's regulated nursing workforce across each setting are important to monitor. However, looking more closely at the role of each regulated nursing profession within these settings helps to better understand how nursing practice is changing as it adapts to new models of care and evolving population needs.

Regulated nurses perform a range of activities to meet the health care needs of the population (Figure 11). While incremental changes to regulated nurses' areas of responsibility are evident across employment settings between 2007 and 2016, looking at each profession individually provides more insight into how changes in the delivery of care, scopes of practice and responsibilities of nurses are shifting to meet the evolving needs of the population in a changing health care system.

**Figure 11** Areas of responsibility for regulated nurses, by place of work, Canada, 2016
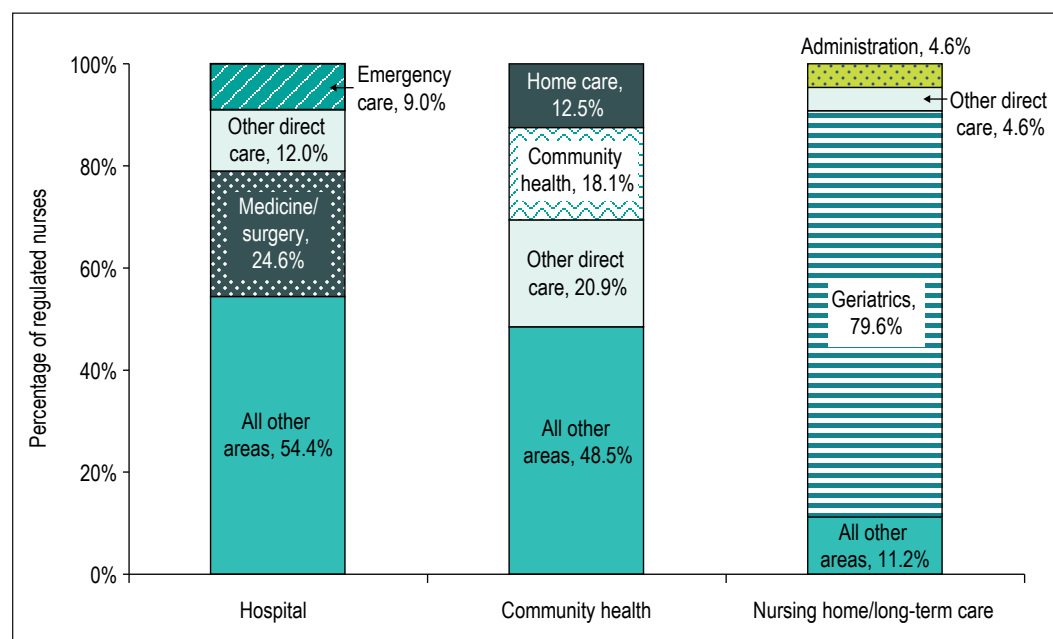


**Note**

For a complete list of areas of responsibility and places of work, please refer the companion product *Regulated Nurses: Methodology Guide, 2016*.
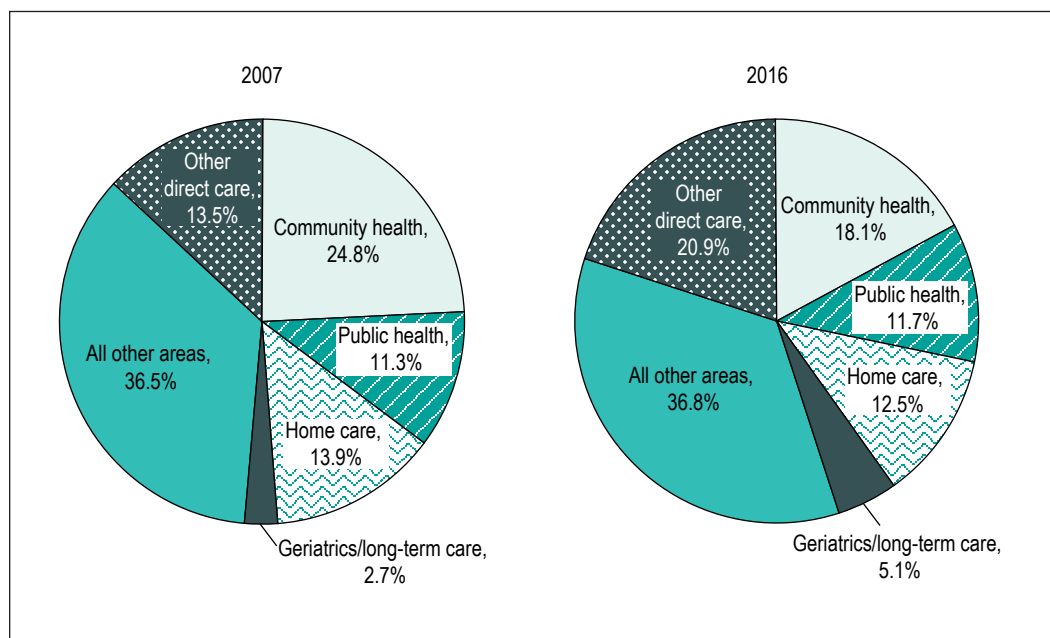
**Source**

Health Workforce Database, 2017, Canadian Institute for Health Information.

Among RNs/NPs employed in hospital settings, the most frequently identified areas of responsibility have remained unchanged, with medicine/surgery accounting for 24.0% and emergency care for 10.7%. Growth has occurred in "other direct care," which may reflect new/emerging roles for RNs/NPs in hospitals. LPNs have seen a large decline in the proportion supporting medicine/surgery (down 10 percentage points, to 27.8%, since 2007). Over the same period, the number of LPNs supporting geriatrics/long-term care in hospital settings almost doubled (from 5,432 in 2007 to 9,847 in 2016). RPNs experienced growth in acute services provision, which accounted for the main area of responsibility for more than 52% of RPNs employed in hospitals in 2016.

In community settings (Figure 12), the number of RNs/NPs focusing on community health and on ambulatory care declined between 2007 and 2016, from 9,960 to 9,152 and from 1,312 to 456, respectively, alongside an increase in those supporting public health (from 5,425 to 6,945) and other direct care (from 5,154 to 7,984). While the number of RPNs focused on acute services increased from 222 in 2007 to 338 in 2016, and on addiction services from 64 to 153 between 2007 and 2016, the proportion working in geriatrics/long-term care declined from 138 to 115.

LPNs in community settings identified many changes to their practice over the 10 years highlighted. The number of LPNs identifying an area of responsibility of other direct care[xiii] and geriatrics/long-term care almost quadrupled from 2007 to 2016 (other direct care from 17.0% [1,082] to 30.1% [4,247]; geriatrics/long-term care from 6.5% [414] to 11.7% [1,655]). Over the same period, the proportion of LPNs focused on community health declined 18.9 percentage points to 12.3%. These shifts may be a reflection of expanding scopes of practice and adoption of integrated team-based care to optimize the delivery of care and support an aging population outside of acute/hospital settings.

**Figure 12** Area of responsibility for regulated nurses employed in community settings, Canada, 2007 and 2016



**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

The responsibilities of regulated nurses employed in nursing home/long-term care settings have also changed since 2007. Among RNs/NPs, the most common area of responsibility, geriatrics/long-term care, remained relatively stable (72.4%) since 2007. However, changes in practice and in the organization of care may be interpreted when looking at the proportion of RNs/NPs identifying other direct care (increase of 2 percentage points) alongside a decline in those identifying administration (decline of 3 percentage points) between 2007 and 2016.

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xiii.  *Other direct care* includes foot care, histology, independent practice, occupational therapy, phlebotomy, reproductive care, care for mentally impaired persons, gynecology, outpatient care and telehealth.

While geriatrics/long-term care remains the main area of responsibility among LPNs employed in nursing home/long-term care settings, the proportion declined 4.3 percentage points to 85.4% between 2007 and 2016. Over the same period, a shift in the proportion of LPNs focused on several clinical areas is also evident and demonstrates the need for increasing flexibility among LPNs to support various responsibilities in these settings.

Since 2007, the proportion of RPNs identifying geriatrics/long-term care (67.4%) and administration (11.3%) as their main areas of responsibility increased (10.1 and 4.3 percentage points, respectively). These shifts coincide with a move away from areas of responsibility focused on rehabilitation (from 7.0% in 2007 to 3.1% in 2016) and developmental habilitation (from 15.9% in 2007 to 7.4% in 2016) among RPNs in nursing home/long-term care settings.

# Conclusion

Regulated nurses are a cornerstone of Canada's health care systems. In recent years, we have seen a slowdown in the growth of the supply of all regulated nurses. Changes in nursing practice are also evident — both in terms of the proportion of nurses employed in each setting and in the areas of responsibility for the regulated nursing professions in each setting. These shifts, alongside changes in the delivery of care — including the introduction of other regulated and unregulated health care providers — and population needs, will be important to monitor to understand the emerging roles of regulated nurses in a health care system that is evolving.

# Appendix: Text alternative for figures

**Data table for Figure 4:** New RN graduates licensed to practise registered nursing, Canada, 2007 to 2016

| Year | Number of RN graduates |
|------|------------------------|
| 2007 | 7,842 |
| 2008 | 9,197 |
| 2009 | 9,035 |
| 2010 | 8,012 |
| 2011 | 9,654 |
| 2012 | 10,566 |
| 2013 | 11,044 |
| 2014 | 10,178 |
| 2015 | 10,537 |
| 2016 | 10,022 |

**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

**Data table for Figure 7:** Regulated nurses by age group, Canada, 2007 to 2016

| Age group | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------|------|------|------|------|------|------|------|------|------|------|
| <35 | 20.8 | 21.6 | 22.3 | 23.0 | 24.1 | 25.3 | 26.7 | 27.7 | 28.9 | 29.5 |
| 35–54 | 56.7 | 55.0 | 53.2 | 51.8 | 50.6 | 49.6 | 48.7 | 48.6 | 48.0 | 47.8 |
| 55+ | 22.5 | 23.5 | 24.5 | 25.2 | 25.2 | 25.1 | 24.6 | 23.7 | 23.2 | 22.7 |

**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

**Data table for Figure 8:** Rates of full-time employment among regulated nurses, Canada, 2007 and 2016

| Type of nurse | 2007 | 2016 |
|---------------|------|------|
| Regulated nurses | 55.3 | 57.3 |
| RNs/NPs | 57.2 | 60.7 |
| NPs | 74.2 | 80.0 |
| LPNs | 47.4 | 48.0 |
| RPNs | 67.8 | 60.8 |

**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

**Data table for Figure 9:** Full-time employment rates of regulated nurses, by place of work, Canada, 2007 and 2016

| Year | Hospital | Community health | Nursing home/ long-term care | Other |
|------|----------|------------------|------------------------------|-------|
| **2007** | 56.7% | 54.8% | 49.8% | 58.1% |
| **2016** | 58.2% | 58.8% | 52.3% | 58.4% |

**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

**Data table for Figure 11:** Areas of responsibility for regulated nurses, by place of work, Canada, 2016

| Area of responsibility | Hospital | Community health | Nursing home/ long-term care |
|------------------------|----------|------------------|------------------------------|
| **All other areas** | 54.4% | 48.5% | 11.2% |
| **Medicine/surgery** | 24.6% | — | — |
| **Geriatrics** | — | — | 79.6% |
| **Other direct care** | 12.0% | 20.9% | 4.6% |
| **Emergency care** | 9.0% | — | — |
| **Community health** | — | 18.1% | — |
| **Home care** | — | 12.5% | — |
| **Administration** | — | — | 4.6% |

**Notes**
— Data is combined with all other areas or is not applicable.
For a complete list of areas of responsibility and places of work, please refer the companion product *Regulated Nurses: Methodology Guide, 2016*.
**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

**Data table for Figure 12:** Area of responsibility for regulated nurses employed in community settings, Canada, 2007 and 2016

| Area of responsibility | Percentage 2007 | Percentage 2016 |
|------------------------|-----------------|-----------------|
| **All other areas** | 36.5 | 36.8 |
| **Other direct care** | 13.5 | 20.9 |
| **Community health** | 24.8 | 18.1 |
| **Public health** | 11.3 | 11.7 |
| **Home care** | 13.9 | 12.5 |
| **Geriatrics/long-term care** | 2.7 | 5.1 |

**Source**
Health Workforce Database, 2017, Canadian Institute for Health Information.

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