



Findings from the
**2005 National Survey of
the Work and Health of Nurses**

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Findings from the *2005 National Survey of the Work and Health of Nurses*

Margot Shields and Kathryn Wilkins

Senior Analysts
Health Statistics Division
Statistics Canada

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Executive summary

The 2005 National Survey of the Work and Health of Nurses (NSWHN) represents a collaborative effort involving the Canadian Institute for Health Information, Health Canada and Statistics Canada. The NSWHN was designed to examine links between the work environment and the health of regulated nurses in Canada, and is the first nationally representative survey of its kind. The survey's high response rate—80%—reflects the enthusiasm with which nurses involved themselves in the survey.

Nearly 19,000 regulated nurses—registered nurses (RNs), licensed practical nurses (LPNs) and registered psychiatric nurses (RPNs)—across the country were interviewed on a variety of topics, including the conditions in which they practice, the challenges they face in doing their jobs, and their physical and mental well-being. They shared their perceptions of work organization, including staffing, shift work, overtime and employee support. Nurses were also asked about work stress, role overload, respect, and quality of patient care. Information about their health status, such as chronic conditions, pain, self-perceived general and mental health, medication use, and the impact of health on the performance of nursing duties, was also collected.



Key findings from the 2005 NSWHN are presented below. Where possible, comparisons of nurses with the general population of employed people (aged 21 or older) are provided, based on data from other Statistics Canada surveys: the Canadian Community Health Survey, the Canadian Labour Force Survey and the Workplace and Employee Survey.

Key findings

[Note: All findings—for example, differences between sub-categories of nurses, or between nurses and employed people in general—mentioned in this report are statistically significant. However, not all statistically significant differences that emerged in the analysis are noted in the text. Significance was defined as a p-value of less than 0.05; all differences were tested for significance using the bootstrap technique.]

Canada's nurses

- In 2005, an estimated 314,900 Canadians were employed as regulated nurses, most of whom were women (94.5%). Although nurses represented only 2% of the total Canadian workforce, female nurses accounted for 4% of all employed women.
- Eight in 10 of Canada's employed, regulated nurses (79%) were registered nurses (RNs), and 20% were licensed practical nurses (LPNs). Registered psychiatric nurses (RPNs) accounted for less than 2% of employed nurses.
- About 6 in 10 nurses worked in hospitals. Another 16% worked in long-term care facilities, 12% in community health settings, and 13% in other settings such as physicians' offices, private nursing agencies, educational institutions, governments or associations.
- The average age of nurses in 2005 was 44.3 years, and the average number of years they had spent in nursing was 18.3. Both female and male nurses were significantly older, on average, than their counterparts in the overall employed population aged 21 or older. On average, female nurses were 3.4 years older than employed women overall, and male nurses were 1 year older than employed men.
- Although the household income of nurses placed them at an overall advantage relative to the general population of employed people, pronounced income discrepancies emerged between types of nurses. A much larger proportion of LPNs (16%) than RNs (4%) or RPNs (3%) were in households classified in the lowest income quintile within their province/territory. Likewise, only 12% of LPNs were living in households in the top quintile in their province/territory, compared with 39% of RPNs and 34% of RNs.



Employment, job and workplace characteristics

- The vast majority of nurses, 84% of both females and males, had permanent jobs in 2005. The comparable figures for the employed population aged 21 or older are 77% for women, and 71% for men.
- About 6 in 10 nurses were employed full time at their main job, and the rest worked part time. LPNs were less likely than RNs and RPNs to have full-time jobs. LPNs working part time were also far more likely to be unhappy with their job arrangement. Of LPNs who worked part time, 42% would have preferred full-time employment, compared with 18% of RNs and 11% of RPNs.
- About 8 in 10 nurses were covered by a union contract or collective agreement. By contrast, only a third of the total employed population had such coverage. Hospital nurses were more likely than nurses employed elsewhere to be unionized: 90% of them were covered, followed by 79% in long-term care facilities, 73% in community health settings, and 51% in other settings.
- Three in 10 nurses reported that they usually worked paid overtime at their main job—an average of 5.4 extra hours per week. Compared with Canadian workers overall, much higher proportions of nurses worked paid overtime.
- Unpaid overtime was even more common among nurses than paid overtime. Nearly half reported usually working unpaid overtime at their main job, for an average of 4 such hours per week. Unpaid overtime was more common among nurses in Alberta, Manitoba and Ontario, where over half of nurses reported usually working unpaid overtime at their main job.
- Just under one in five (19%) female nurses had more than one job, double the figure for employed women overall (9%). The likelihood of multiple jobs was even higher among male nurses, at 23% versus 9% of all employed men.
- Quebec nurses were far more likely than those in the rest of the country to have access to employer-supported childcare. One-quarter of nurses in Quebec (26%) had such help available; elsewhere the proportions ranged from less than 2% in Newfoundland and Labrador to 14% in Manitoba.

Nursing care—quality, risks and workload pressures

- When asked if the quality of care delivered in their workplace had changed over the past year, more than half (57%) of nurses felt it had remained the same, 27% reported deterioration, and 16%, improvement.
- Over one-quarter (27%) of Quebec nurses reported occasional or frequent medication errors among patients in their care, a higher proportion than reported elsewhere. Outside Quebec, percentages ranged from 7% in Newfoundland and Labrador to 18% in British Columbia.



- Nurses in British Columbia were more likely than those elsewhere to report fair or poor team care. BC nurses, along with those in Saskatchewan, were also more likely to report that they as individuals had given poor or fair care.
- Nurses in British Columbia and in Saskatchewan were more likely than those in the rest of the country to have been injured on the job: 1 in 8 BC nurses (12%) and nearly this share of Saskatchewan nurses (11%) reported being injured—about twice the proportion in Prince Edward Island (1 in 20). The likelihood of on-the-job injury was also relatively low for Quebec nurses (7%).
- Nearly half (48%) of nurses who provided direct care reported having ever had a needlestick or other sharps (for example, scissors, scalpels, razors) injury from an object that had been contaminated by use on a patient, and 11% reported having had such an injury in the past year.
- Over one-quarter (29%) of nurses who provide direct care reported that they had been physically assaulted by a patient in the previous year; 4 in 10 male nurses (44%) reported physical assault, compared with just under 3 in 10 female nurses (28%). Emotional abuse from a patient was reported by 44% of nurses.
- Over half (54%) of nurses said that they often arrived at work early or stayed late in order to get their work done; 62% reported working through breaks. Two-thirds (67%) often felt that they had too much work for one person, and 45% said that they were not given enough time to do what was expected in their job.

Work environment—stress, collaboration and respect

- Substantial shares of Canadian nurses—45% of female and 51% of male nurses—felt they had low co-worker support, while in the employed population overall, the estimate for each sex was around 33%.
- More than 60% of both female and male nurses said their jobs presented high physical demands; the corresponding proportions for the employed population as a whole were 38% and 46%. The proportion of LPNs reporting high physical demands (75%) exceeded the proportions for RNs (60%) and RPNs (45%).
- Nurses' perceptions of their working relations with physicians were overwhelmingly positive: 87% reported good working relations; 81%, a lot of teamwork; and 89%, collaboration.
- Job dissatisfaction was more prevalent among nurses than among employed individuals overall. About 12% of both female and male nurses were dissatisfied, compared with 8% of all employed women and men. However, only 4% of nurses said they actually planned to leave nursing in the next year, and most of these nurses were retiring.



Physical and mental health

- Back problems and arthritis were more prevalent among female nurses than among employed women overall, but no significant differences emerged for men. A quarter (25%) of female nurses had back problems, compared with 19% of females in the employed population overall.
- In the previous 12 months, more than 1 in 3 nurses (37%) had experienced pain serious enough to prevent them from carrying out their normal daily activities. More than 1 nurse in 10 reported “severe” or “unbearable” pain, and nearly one-quarter of all nurses said that pain had affected their ability to carry out their nursing duties. Three-quarters of the nurses who had had activity-limiting pain in the previous year said that it had resulted from work-related factors.
- Compared with employed people overall, nurses were more likely to have experienced depression in the previous year. Of all employed women, 7% had experienced depression, and of employed men, 4%. These figures compared with 9% of both female and male nurses.
- About 1 nurse in 3 stated that at least some of the time in the previous month, their physical health had made it difficult to handle their workload.
- In the year before they were surveyed, 61% of nurses had taken time off for health reasons. Nurses who were absent missed an average of 23.9 days over the year. The average number of days absent for all nurses—even those who had not been off—was 14.5 days per nurse. An estimated 14% of all nurses had been absent for 20 or more days during the previous year. In Quebec, nurses who had taken time off averaged a total of 44 days absence, well over twice as long as anywhere else (13 to 20.6 days).

Bringing it all together—associations between nurses’ conditions of work and their health

- Multivariate analysis was used to examine associations between work conditions and health, while taking into account the potentially confounding effects of sex, age, type of nurse, province/territory, household income, smoking and obesity.
- Fair or poor general health among nurses was related to components of work stress, including high job strain, low support from their supervisor or co-workers, high job insecurity and high physical demands. Other factors—low autonomy, poor nurse-physician working relations, low respect from superiors and high role overload—were also associated with poor or fair general health.



- Nurses who usually worked evenings had higher odds of fair or poor general health, compared with nurses who usually worked days. Nurses employed in long-term care facilities were also more likely to report their health as fair or poor, compared with those who worked in hospitals.
- Poor or fair mental health was associated with usually working evening shifts and with working in long-term care facilities. Psychosocial factors were also important to mental health; these included high job strain, low supervisor and low co-worker support, low autonomy, low control over practice, poor nurse-physician working relations, lack of respect from superiors or co-workers, and high role overload.
- Work absences for health-related reasons totalling 20 or more days over the previous year were more common among nurses with union or collective agreement coverage.
- The odds of being absent 20 or more days for health-related reasons were high for nurses reporting high job strain, low supervisor support, high physical demands on the job, low control over practice, lack of respect from superiors, or high role overload. For nurses reporting low respect from their superiors, the odds of missing 20 or more days were 50% higher, compared with nurses reporting more respect from this source.



Introduction

The 2005 National Survey of the Work and Health of Nurses (NSWHN) represents a landmark achievement. The survey was a collaborative effort between the Canadian Institute for Health Information, Health Canada, and Statistics Canada. From October 2005 through January 2006, nurses across Canada participated in a ground-breaking survey—one designed to examine links between their work environment and their health. Nearly 19,000 nurses generously gave their time to provide information on the conditions in which they practice, the challenges they face in doing their jobs, and their physical and mental well-being. They shared their experiences and perceptions of work organization, including staffing, shift work, overtime and employee support. Nurses' views of work stress, role overload, respect and quality of patient care were also important components of the information collected by the NSWHN.

Based on the responses of the nurses who participated, this report provides initial findings from the NSWHN. The report profiles the workforce of regulated nurses, and, whenever possible, compares nurses' demographic, social and lifestyle characteristics with those of employed Canadians overall. Data for these



comparisons were drawn from other Statistics Canada surveys—the Canadian Community Health Survey, the Canadian Labour Force Survey and the Workplace and Employee Survey.

The target population for the 2005 National Survey of the Work and Health of Nurses (NSWHN) was *regulated nurses*, the largest occupational group in Canada's health sector. To be included in the survey, each nurse had to be registered with a provincial nursing college, association or council, and either be working as a nurse or temporarily absent from a position in nursing. Nurses who had a nursing job but were not working at the time of the survey were defined as *temporarily absent*.

There are three categories of regulated nurses in Canada: *registered nurses (RNs)*, *registered psychiatric nurses (RPNs)*, and *licensed practical nurses (LPNs)*. RNs and LPNs practice in every province and territory. RPNs, who are registered only in Manitoba, Saskatchewan, Alberta and British Columbia, practice almost exclusively in these provinces.

RNs practice in a variety of nursing domains including direct care (clinical), education, administration, and research and policy. Some of their areas of responsibility include medical care, surgical care, obstetrics, psychiatric care, critical care, pediatrics, geriatrics, community health, occupational health, emergency care, health promotion, rehabilitation and oncology.

LPNs work independently or in partnership with other members of the health care team to provide nursing services to individuals, families and groups of all ages. The majority are employed in hospitals or long-term care facilities. The most common area of responsibility for LPNs is geriatrics/long-term care.

RPNs provide services to individuals, families, groups and communities 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. RPNs practice in a variety of settings.

Nursing care is delivered around the clock—and nurses' jobs must be organized accordingly. The NSWHN asked nurses about all the hours they put in at work, whether paid or unpaid. The report offers a comparison of time on the job between nurses and employed people in general.

As the health professionals in closest frequent contact with their patients, nurses have a unique perspective on the quality of care that patients receive. Under the protection of privacy assured by the NSWHN, nurses offered candid views on the effects of staffing on the quality of patient care, as well as the frequency of adverse events such as nosocomial infections, medication errors, and complaints from patients and their families. Nurses also reported incidents involving harm to themselves—needlestick injury, injury resulting from lifting or transferring patients, physical and emotional assault, and exposure to infectious diseases.



To meet the physical and emotional needs of patients and their patients' families, nurses must be compassionate, skilled and resilient. Any patient-nurse relationship also involves the nurse's collaboration within a team of physicians, other health care professionals and, of course, other nurses. Compounding the complexity of their various duties and roles, nurses must often face a broad range of physical and emotional challenges in a hectic, even critical, work environment. Perhaps not surprisingly then, the proportion of nurses who reported a high level of work stress—determined by the level of job strain, physical demands, co-worker support, supervisor support—compared unfavourably with that for employed people overall. Probably the most distressing finding concerns co-worker support; compared with employed Canadians in general, a disproportionately high share of nurses indicated being exposed to “hostility or conflict” from co-workers. Curiously, though, nearly all nurses felt that they were respected by their colleagues.

On the positive side, the vast majority of nurses reported that they had the support of their supervisors and immediate managers, and that they felt free to use their own judgment in making important decisions. Nine out of 10 nurses reported that they had good working relations and collaborated well with doctors. And encouragingly, over half of nurses said that they were able to spend time with their patients, thanks to adequate support services.

Reflecting the physical effort that nursing often requires, back problems and chronic pain were fairly common among nurses. And most nurses who reported that they had experienced pain serious enough to limit their normal activities attributed it to job-related factors.

Depression was also prevalent in nurses; nearly 1 in 10 reported experiencing depression within the past year. An even higher proportion—close to one-fifth—reported that mental health problems in the past month had interfered with their ability to do their job. Within the past year, over half of nurses had taken time off work due to physical illness, and more than 1 in 10 had been off because of their mental health.

To synthesize the vast amount of information that nurses reported about themselves and their jobs, analysis was undertaken to address the question: How do nurses' work environments relate to their physical and mental health? Factors reflecting the manner in which nurses' work is organized, as well as those related to psychosocial influences (such as work stress, perceived respect, and working relations with colleagues), were examined in relation to physical and mental health, and work absence due to health-related reasons. The results of the analysis underscore the importance of collaboration and respect in the workplace.



This report accompanies the release of the data from the 2005 National Survey of the Work and Health of Nurses—an unprecedented national database that will be of enormous value to health human resources researchers and policy-makers.

From the survey design stage to the review of the draft report, this project was guided by the Health of Nurses Survey Advisory Committee, whose members were drawn from nursing organizations, academic institutes, government bodies, labour unions and health research agencies.



Canada's nurses

Chapter 1

One of Canada's greatest achievements of the 20th century was the creation of its health care system—a system that provides medically necessary care and preventive services to all Canadians, free of charge. Of course, the success of such a system depends heavily on the people it employs, of whom nurses are a major and vital component.

Who are the women and men who comprise Canada's nursing workforce today? To provide information about their characteristics and how they compare with other employed people, the 2005 National Survey of the Work and Health of Nurses (NSWHN) included a range of questions about the settings in which nurses work and what their jobs involve. Nurses were asked how long they had worked in nursing and whether or not they intended to continue in their profession. As well, they were asked about practices that may reflect their social milieu and affect their health, including smoking and the use of alcohol.



Credentials, specialties and employers

According to the NSWHN, an estimated 314,900 regulated nurses were employed in Canada in 2005. (In this report, the term “nurses,” unless otherwise specified, refers only to employed, regulated nurses; specifically, registered nurses, licensed practical nurses and registered psychiatric nurses, combined.) The overwhelming majority of nurses—94.5% or 297,600—were women, with men constituting just 5.5% (17,300) (Table 1.1). Thus, while nurses represented only 2% of all employed people aged 21 or older, female nurses made up 4% of all employed women these ages (data not shown). (Because virtually all nurses are aged 21 or older, the employed population aged 21 or older is used for comparisons in this report.)

table

Percentage distribution of nurses, by province/
territory and by sex, Canada, 2005

1.1

	Females/Males within province					
	Total number of nurses		Females		Males	
	'000	%	Number	%	Number	%
Canada	314.9	100.0	297.6	94.5	17.3	5.5
N.L.	7.8	2.5	7.3	93.8	0.5	6.2
P.E.I.	1.9	0.6	1.9	96.8	0.1 ^E	3.2 ^E
N.S.	11.9	3.8	11.4	95.6	0.5 ^E	4.4 ^E
N.B.	10.2	3.2	9.7	95.0	0.5	5.0
Que.	77.3	24.5	70.7	91.5	6.5	8.5
Ont.	113.0	35.9	108.5	96.0	4.5	4.0
Man.	14.0	4.5	13.0	93.1	1.0	6.9
Sask.	11.4	3.6	10.9	95.7	0.5	4.3
Alta.	31.9	10.1	30.7	96.2	1.2	3.8
B.C.	34.2	10.9	32.2	94.4	1.9	5.6
Y.T., N.W.T., Nvt.	1.3	0.4	1.2	91.7	0.1 ^E	8.3 ^E

Note: Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for other provinces combined ($p < 0.05$).

■ Significantly lower than estimate for other provinces combined ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

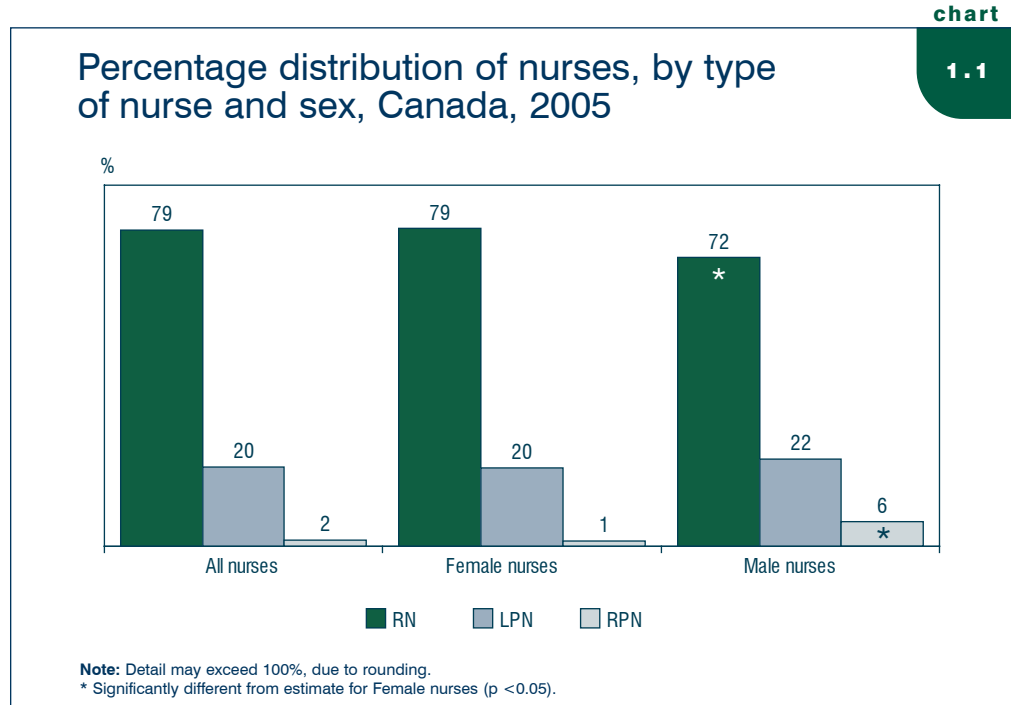
Data source: 2005 National Survey of the Work and Health of Nurses.

RNs, LPNs and RPNs

Most of Canada’s nurses (79%) were registered nurses (RNs), and 20% were licensed practical nurses (LPNs) (Chart 1.1). Registered psychiatric nurses (RPNs) accounted for less than 2% of employed nurses.



At 79%, the proportion of female nurses who were RNs was significantly higher than the figure for male nurses (72%). By contrast, the proportion of male nurses who were RPNs (6%) was much higher than the figure for female nurses (1%). The proportions of female and male nurses who were LPNs were similar.



Data source: 2005 National Survey of the Work and Health of Nurses.

According to the NSWHN, Quebec and Manitoba had more male nurses than the rest of the country. In these two provinces, about 1 in 12 nurses were men (Table 1.1). The proportions of male nurses were relatively low in Prince Edward Island, Alberta, Ontario and Saskatchewan.

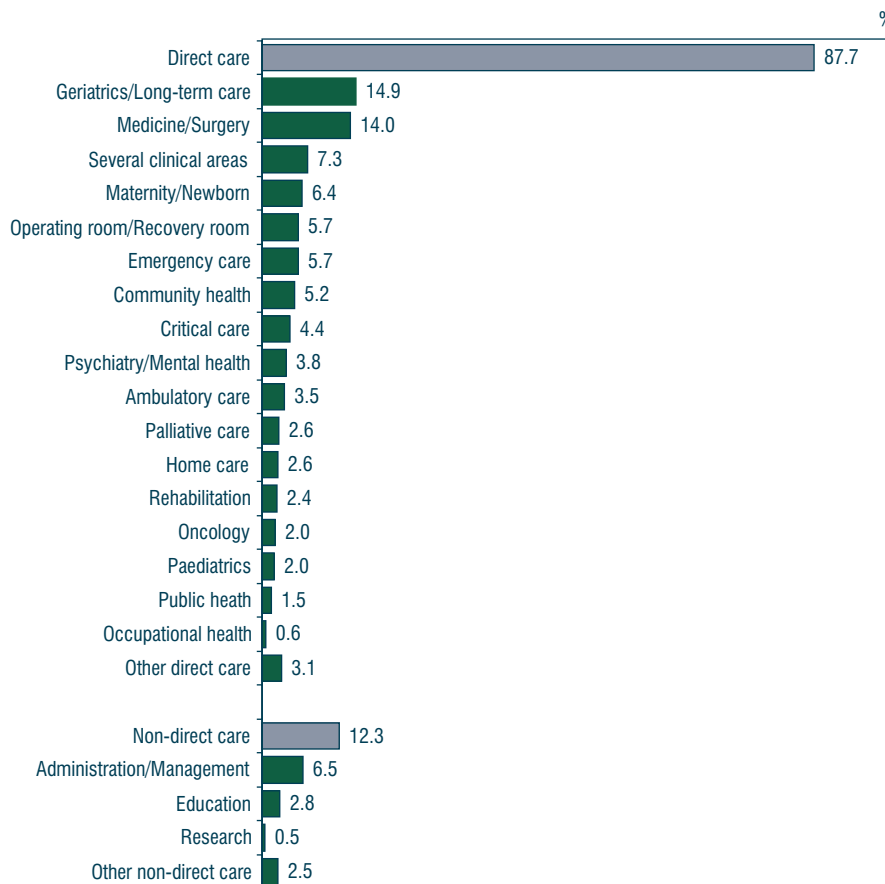
About 8 in 10 nurses in Quebec, Ontario, Alberta, British Columbia and the territories were RNs in 2005 (Table 1.2). In the four Atlantic provinces, as well as Manitoba and Saskatchewan, the proportions of RNs were somewhat lower. In Newfoundland and Labrador, 33% of all employed nurses were LPNs, while in British Columbia, only 13% were in this category. RPNs were employed only in Western Canada, and Saskatchewan had the highest proportion of nurses in this group, at 8%.



chart

1.2

Percentage distribution of nurses, by type of care (direct or non-direct) provided, Canada, 2005



Note: Reflects "main job;" that is, the nursing job with the most weekly hours (see Definitions).

Data source: 2005 National Survey of the Work and Health of Nurses.

Of course, some of Canada's nurses were temporarily absent from work when the National Survey of the Work and Health of Nurses was conducted. The survey found that, in 2005, 3% of nurses—that's about 10,000 of all employed RNs, LPNs and RPNs combined—were away from a position in nursing (data not shown). About half of these absentees were on maternity or paternity leave, and about one-third were temporarily off because of their own illness or disability. However, the NSWHN included even those nurses who were on temporary leave from their jobs.



table

Percentage distribution of nurses, by province/territory and by type of nurse, Canada, 2005

1.2

	RN		LPN		RPN	
	Number		Number		Number	
	'000	%	'000	%	'000	%
Canada	248.1	78.8	62.0	19.7	4.9	1.6
N.L.	5.2	67.3	2.6	32.7	n/a	n/a
P.E.I.	1.4	70.0	0.6	30.0	n/a	n/a
N.S.	8.9	74.9	3.0	25.1	n/a	n/a
N.B.	7.6	74.8	2.6	25.2	n/a	n/a
Que.	61.6	79.8	15.6	20.2	n/a	n/a
Ont.	89.6	79.3	23.4	20.7	n/a	n/a
Man.	10.7	76.6	2.4	17.1	0.9	6.3
Sask.	8.3	72.8	2.1	18.8	1.0	8.4
Alta.	25.7	80.5	5.1	16.0	1.1	3.5
B.C.	27.8	81.4	4.4	12.9	1.9	5.7
Y.T., N.W.T., Nvt.	1.1	84.6	0.2	14.8	n/a	n/a

Note: Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for other provinces combined (p <0.05).

■ Significantly lower than estimate for other provinces combined (p <0.05).

n/a: not applicable.

Data source: 2005 National Survey of the Work and Health of Nurses.

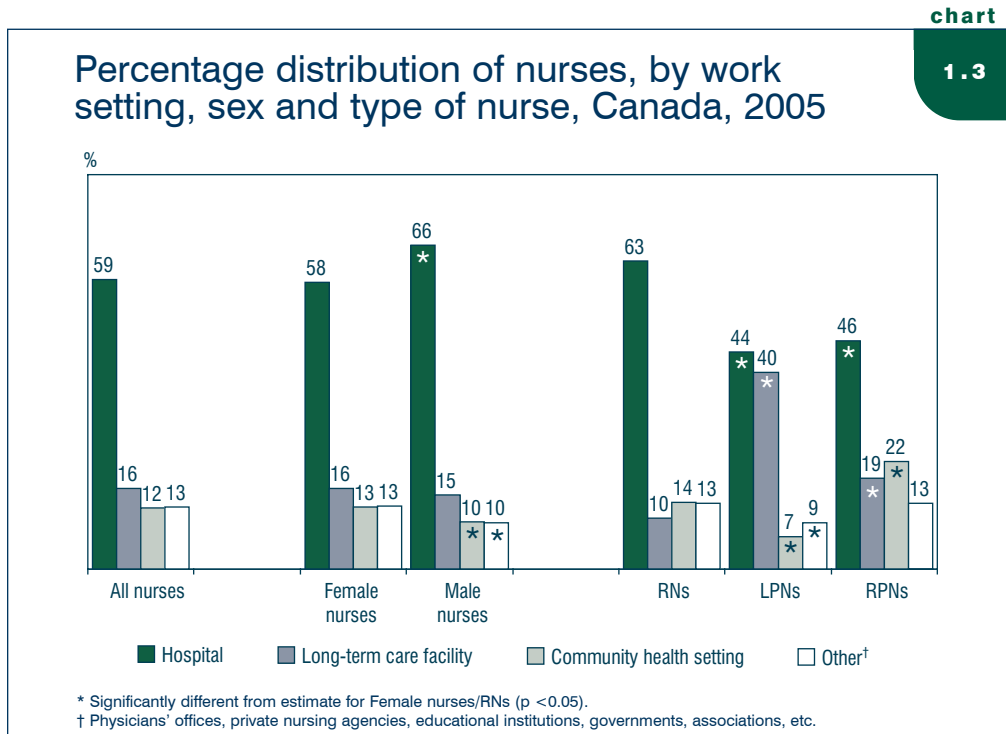
Types of care, work settings

Canada's nurses provide a broad spectrum of care across a variety of settings. In 2005, the vast majority of nurses (88%) were employed in positions involving direct patient care (Chart 1.2). The remaining 12% were in administration/management, education, research, or other jobs that did not involve caring directly for patients.

In 2005, 59% of nurses worked in hospitals (Chart 1.3). The remaining nurses worked in long-term care facilities, community health settings, or other settings such as physicians' offices, private nursing agencies, educational institutions, governments or associations. As a group, males were more likely to work in hospitals, and less likely to work in community health, or other settings.



Most RNs (63%) worked in hospitals, but less than half of RPNs and LPNs did so. About 4 in 10 LPNs were in long-term care facilities, as were about 2 in 10 RPNs.



Data source: 2005 National Survey of the Work and Health of Nurses.

Average age, length of career (Appendix Table 1)

In 2005, the average age of a Canadian nurse was 44.3 years, and the average number of years she or he had spent in nursing was 18.3 (Table 1.3). Female nurses, at 44.4 years old on average, had practiced an average of 18.4 years. Their male counterparts were slightly younger, averaging 42.9 years of age, and had been in nursing for a somewhat shorter period—15 years.

Older than other workers

In 2005, both female and male nurses were significantly older, on average, than females and males in the overall employed population aged 21 or older. With an average age of 44.4, women in nursing were 3.4 years older than employed women in general. And, at 42.9, the average age of a male nurse was about 1 year above that of an employed male.



Average age, as well as length of career, varies by type of nurse. LPNs, with an average age of 44, were somewhat younger than others in nursing; RPNs were a bit older, at 46.4 years. LPNs had spent a shorter time in nursing (an average of 16.5 years), compared with 18.7 years worked for RNs, and 19.7 for RPNs.

table

Nurses' average age and average years employed in nursing, by sex and type of nurse, Canada, 2005

1.3

	Average age	Average years in nursing
Total nurses	44.3	18.3
Female nurses	44.4*	18.4
All employed females (age 21+)	41.0	n/a
Male nurses	42.9*	15.0
All employed males (age 21+)	41.9	n/a
Type of nurse		
RN	44.3	18.7
LPN	44.0	16.5
RPN	46.4	19.7

■ Significantly higher than estimate for the other categories of nurses in the group combined (p <0.05).
 ■ Significantly lower than estimate for the other categories of nurses in the group combined (p <0.05).
 * Significantly different from estimate for All employed females/males (p <0.05).
 n/a: not applicable.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Hospital nurses were younger, on average, than those who worked outside hospital settings. The number of years spent in nursing was slightly less for nurses in hospitals and long-term care facilities, compared with those working in community health settings or elsewhere.

Socio-economic characteristics

Living arrangements (Appendix Table 2)

Just over two-thirds of nurses lived as part of a couple, 8% were single parents, 14% lived alone, and 9% had other living arrangements (Table 1.4). Compared with all employed women, female nurses were more likely to be part of a couple with children. The likelihood of being a single parent was slightly higher for nurses—both females and males—than for employed people in general. LPNs were more likely, and RNs, less likely, to be single parents—an estimated 11% of LPNs were on their own with children, compared with 8% of RNs and 7% of RPNs. Single parenthood was more common in Quebec (10% of nurses, compared with about 6% in the Prairie provinces).



Nurses were half as likely as employed people in general to have “other” living arrangements—that is, to have arrangements that did not involve living as part of a couple, a single parent or alone. Two phenomena explain most of the difference; higher proportions of the general employed population lived with (a) parent(s) (8% versus 2% of nurses) or with others to whom they were unattached (5% of employed people in general versus 2% of nurses) (data not shown).

table

Composition of nurses' households, by sex, Canada, 2005

1.4

	Couple with children	Couple, no children	Single parent	Lives alone	Other
	%	%	%	%	%
Total nurses	43.5	25.0	8.2	13.8	9.4
Female nurses	43.5*	25.1	8.5*	13.5*	9.4*
All employed females (age 21+)	38.6	24.2	7.2	10.5	19.4
Male nurses	43.5	24.4	3.6* ^E	19.0*	9.5*
All employed males (age 21+)	42.3	23.8	1.7	10.5	21.7

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

* Significantly different from estimate for All employed females/males (p < 0.05).

^E Coefficient of variation between 16.6% and 33.3% (Interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Education

In 2005, 27% of female nurses had a bachelor's degree or higher, the same as the estimate for the overall employed population of females aged 21 or older (data not shown). The figures for men differed slightly: 24% of male nurses had this level of education versus 26% of all employed males. In 2005, one-third (33%) of RNs had a degree, as did nearly one-tenth (9%) of RPNs (data not shown).

Household income (Appendix Table 3)

Although the household income (see Definitions) of Canada's nurses placed them at an overall advantage relative to the general population of employed people, income discrepancies emerged between types of nurses. To examine nurses' household income, the household incomes of all employed Canadians aged 21 or older were first adjusted for the number of people in the household and then, within each province or the combined territories, grouped into quintiles; that is, equal fifths. Nurses' household incomes were similarly adjusted for household size and then compared with the household income quintile cut-points for the employed population within each province or the combined territories.

Only 7% of nurses were in households with incomes that placed them in the lowest income quintile for the general employed population within their own



province/territory, and 29% were in households with incomes in the highest quintile. A larger share of female (7%) than male (5%) nurses were in households classified in the lowest quintile. Similarly, a higher proportion of male (34%) than female (29%) nurses were in households with incomes in the highest quintile.

Even when only those nurses with a university degree were compared against the subpopulation of employed people with a degree, nurses were better off. For example, of university-educated female nurses, 41% lived in households in the top income quintile, compared with 32% of women with a degree in the general employed population (data not shown).

A much larger proportion of LPNs (16%) than RNs (4%) or RPNs (3%) were in households classified in the lowest income quintile. Likewise, only 12% of LPNs were living in households in the top quintile, compared with 39% of RPNs and 34% of RNs.

One in eight nurses (12%) employed in long-term care facilities were in households with incomes placing them in the lowest quintile, a higher percentage than that of nurses employed elsewhere. For example, only 5% of hospital nurses were in households in the lowest quintile. At the other end of the income range, 21% of long-term care nurses were in households in the top quintile, compared with 29% of nurses in hospitals, 31% in community health settings, and 39% in other settings.

Further analysis using multivariate regression was undertaken to explore the possibility that the association between low income and employment in a long-term care facility might be explained by the higher proportion of LPNs working in these settings, compared with hospitals and other settings (see Analytical techniques). However, the results of this analysis indicated that this was not the case; the odds of having a household income in the lowest quintile were significantly elevated for nurses working in a long-term care facility, even when controlling for type of nurse.

In Quebec, the proportion of nurses (9%) in the lowest (province-specific) household income quintile was higher than the proportions elsewhere. At the upper end of the income range, the proportions of nurses with household incomes in the highest province/territory-specific quintile were larger in Saskatchewan (42%), Manitoba (39%), Nova Scotia (36%), Alberta (32%) and Newfoundland and Labrador (32%).

When income quintiles were calculated based on household income data for all employed Canadians together, the proportions of nurses in the lowest quintile were higher in provinces east of Ontario—reflecting lower household incomes in that region of the country (data not shown).



Lifestyle factors

Obesity (Appendix Table 4)

Obesity was determined using the body mass index (BMI), a measure of weight adjusted for height. BMI is calculated by dividing weight in kilograms by height in metres squared. “Obese” was defined as a BMI of 30 or more (see Definitions). By this standard, a person 1.63 metres (5 feet 4 inches) tall weighing 84 kilograms (185 pounds) would be obese (BMI = 31.6), as would someone 1.78 metres (5 feet 10 inches) tall weighing 100 kilograms (220.5 pounds) (BMI = 31.6).

Based on self-reported height and weight, an estimated 14% of female nurses and 18% of male nurses were obese, similar to the estimates for all female and male employed Canadians. Obesity was more common among older nurses. Among those aged 35 and up, about 15% were obese, while 11% of nurses younger than 35 were in this weight category. RPNs and LPNs were more likely than RNs to be obese: 17% and 19% versus 13%.

Higher proportions of nurses in the four Atlantic provinces, and in Manitoba and Saskatchewan, were obese, while those in British Columbia and Quebec had a lower likelihood of obesity.

Smoking (Appendix Table 5)

Nurses are significantly less likely to smoke than members of the employed population overall. In 2005, 16% of female nurses and 21% of male nurses said that they smoked either daily or occasionally; by comparison, 23% and 27% of the female/male employed population reported doing so.

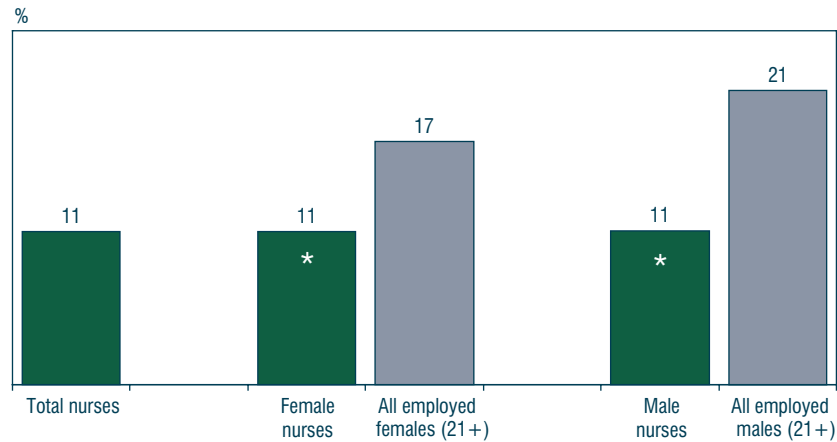
About 11% of female and male nurses said they smoked every day. This means that over two-thirds (68%) of the female and over half of the male nurses who reported smoking either daily or occasionally were actually daily smokers. However, the corresponding figures for the overall employed population were notably higher. In this group, 17% of the women and 21% of the men were daily smokers, accounting for fully three-quarters of the daily/occasional smokers.

The proportions of LPNs (19%) and RPNs (16%) who smoked daily were strikingly higher than the figure for RNs (9%). And among nurses overall, those in long-term care facilities were far more likely than those working in other settings to be daily smokers: 16% compared with 11% for hospital nurses, 9% for those in community health settings, and 8% for those employed in other settings.



Percentage of nurses and all employed people who smoke daily, by sex, Canada, 2005

1.4



* Significantly different from estimate for All employed females/males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Around 13% of Quebec and Saskatchewan nurses were daily smokers, slightly but significantly above rates for nurses working elsewhere in Canada. By contrast, rates of daily smoking were low among nurses in British Columbia (7%) and Alberta (9%).

Drinking (Appendix Table 6)

Regular drinking, that is, consuming at least one alcoholic drink at least twice a week, was less common among nurses than among the employed population in general. Close to one-quarter (23%) of all employed women and 41% of all employed men were regular drinkers, compared with 18% of female nurses and 28% of male nurses.

Regular drinking among nurses rose with age, from 10% of those younger than 35 to 23% among nurses aged 45 or older. Differences in drinking habits by type of nurse were marked. The proportions of RNs and RPNs who were regular drinkers (about 20%) were twice as high as the proportion of LPNs (10%). Differences were also notable according to where nurses were employed. Those in hospitals or long-term care facilities were less likely than those employed elsewhere to be regular drinkers.



Employment, job and
workplace characteristics

Chapter 2

To meet the needs of patients and their families, nurses work in shifts around the clock. In addition, nurses commonly work overtime—for example, to care for a patient whose condition has suddenly changed, or to help out when a unit is short of staff. As well, nurses may have more than one job. For all these reasons, the hours that nurses put in can be long and irregular. To examine nurses' employment, job and workplace characteristics, the 2005 National Survey of the Work and Health of Nurses asked about issues such as full-time versus part-time work, paid and unpaid overtime, uncertain work schedules, and availability of employer-supported programs (such as childcare) to accommodate the unique circumstances in which nurses work.



Characteristics of main job

Permanent employment (Appendix Table 7)

The vast majority of nurses, 84% of both women and men, had permanent jobs in 2005 (see Definitions). Nurses' likelihood of having a permanent job was much greater than that for all employed people aged 21 or older, among whom the percentages were 77% and 71%, respectively, for women and men.

Fully 90% of nurses aged 45 to 54 had a permanent job, while the proportions for nurses younger than 35 and 55 or older were just under 80%. LPNs were somewhat less likely to be permanent than were RNs and RPNs.

The percentage of nurses with permanent employment varied substantially across the country. Only 62% of nurses in the territories had a permanent job, reflecting the practice of relief staffing in those regions. In 2005, 30% of nurses who had spent any time working in the territories worked there on a relief basis (data not shown). Proportions were also relatively low in Newfoundland and Labrador, Quebec and British Columbia.

Full- versus part-time (Appendix Table 7)

About 6 in 10 Canadian nurses were employed full time at their main job in 2005, and the remainder worked part time. Most were content with their particular working arrangements, but some were not. Among full-time nurses, about one-fifth would have preferred part-time employment. A similar proportion of part-time nurses wanted full-time work.

Men in nursing were more likely (79%) to have full-time jobs than were the women (60%). And men with full-time jobs were less likely than their female counterparts to want part-time work (13% versus 22%). Men with part-time employment were less likely than the women to be content with this arrangement: 33% of male nurses would have preferred a full-time job versus 23% of female nurses.

Two-thirds of nurses aged 45 to 54 worked full time, a significantly higher proportion than that for nurses in other age groups. Nurses aged 35 to 44 who worked full time were more likely than full-time nurses of other ages to want a part-time job instead. Even though 4 in 10 nurses aged 55 or older had part-time jobs, the vast majority of them (92%) seemed to be content with this arrangement—that is, they did not indicate that they would prefer to work full time.

LPNs were less likely than RNs and RPNs to have full-time jobs. Only 56% of LPNs had full-time positions, compared with 62% of RNs and 71% of RPNs. Of nurses with part-time jobs, LPNs were less likely to be content with this arrangement than other types of nurses. Four in ten LPNs with part-time jobs (42%) would have preferred full-time employment, compared with 18% for RNs and 11% for RPNs.



Nurses employed in long-term care facilities were less likely than others to have full-time positions. Just over half (54%) of nurses in such institutions worked full time, compared with over 60% of nurses employed elsewhere.

Full-time jobs were less common among nurses in Alberta (47%), Manitoba (50%) and Prince Edward Island (53%) than in the rest of the country. By contrast, nearly four-fifths of nurses in Newfoundland and Labrador had full-time jobs. Moreover, in Alberta, where full-time jobs were already much less common, the percentage of full-time nurses who wanted part-time jobs was higher (31%) than in other jurisdictions. In Quebec, 59% of nurses worked full time and 41% worked part time, proportions close to the national averages. However, relatively high proportions of nurses were discontent: over one-quarter of full-time nurses in Quebec wanted a part-time job, and over one-third of part-time nurses wanted a full-time position.

Unions, collective agreements (Appendix Table 7)

About 8 in 10 Canadian nurses (82%) were covered by a union contract or collective agreement. The likelihood of such coverage was higher for male nurses (89%) than for their female counterparts (81%). And, compared with the overall employed population, nurses were far more likely to be unionized: only a third of the total employed population had such coverage.

Hospital nurses were significantly more likely than nurses employed elsewhere to have a union/collective agreement: 90% of them were unionized, followed by 79% in long-term care facilities, 73% in community health settings, and 51% of nurses in other settings.

Union contract/collective agreement coverage was lower among Ontario nurses: 73% versus over 80% in the rest of the country.

Hours at main job

Average workweek (Appendix Table 8)

Not including overtime, Canadian nurses (including those who worked only part time) worked an average of 32.2 hours per week at their main job. According to the NSWHN, the “main job” is the one at which the nurse spent the most hours per week. The average workweek for female nurses (32.0 hours) was slightly shorter than that of their male counterparts (34.7). Compared with all employed women aged 21 or older, female nurses worked nearly 2 hours a week less at their main job—excluding overtime.



Overtime, however, tends to add several hours to a nurse's typical week at work. With the addition of paid and unpaid overtime, a nurse's average week was 35.7 hours, virtually the same as for all employed females. The pattern for men was different. Before overtime, male nurses worked an average of about 6 fewer hours per week at their main job than did employed men overall. Even with overtime, either paid or unpaid, the lower average for male nurses persisted: 38.8 hours versus 44.1 hours for all employed men.

Excluding or including overtime, LPNs worked fewer hours than did RPNs and RNs combined. Including overtime, LPNs averaged 34.4 hours per week, while RPNs averaged 37.6 hours, and RNs, 36 hours.

Hospital nurses put in more hours at their main job, on average, than did nurses in other settings—whether or not overtime was included. When overtime was counted, nurses in Newfoundland and Labrador, Nova Scotia, New Brunswick, and the territories averaged significantly more hours at their main job than did nurses elsewhere. The excess was notable in the territories, where a nurse's average week was 37.6 hours before overtime, and about 10 hours longer with overtime (47.8).

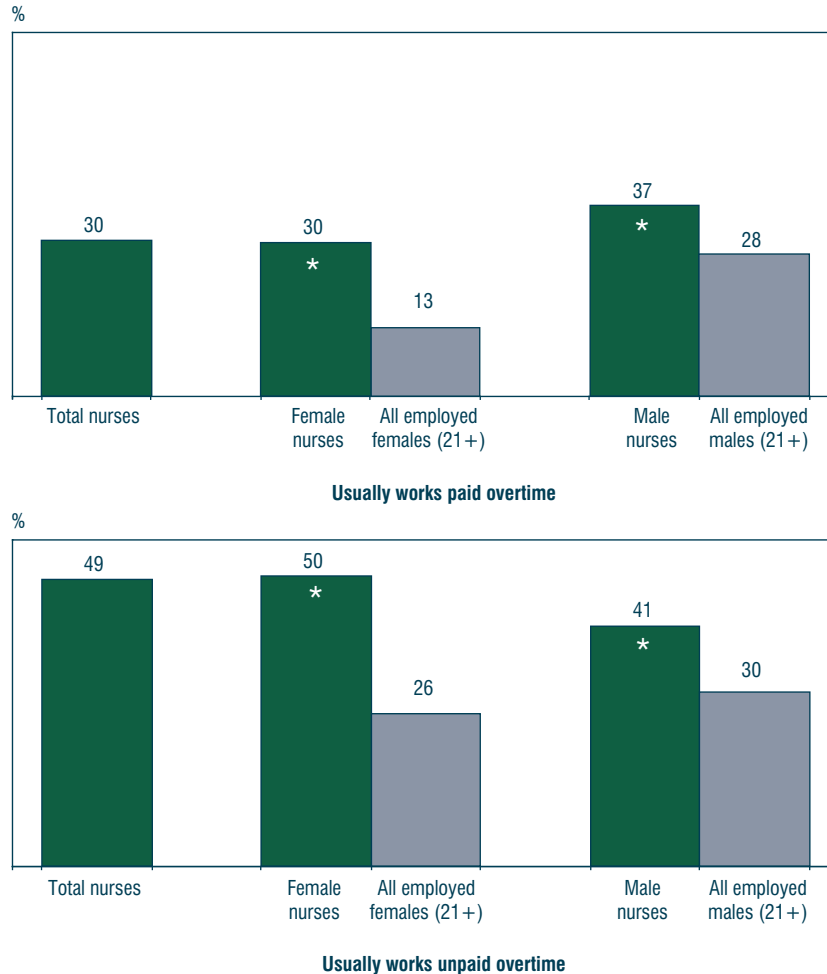
Paid overtime (Appendix Table 8)

About 3 in 10 nurses (excluding those who were self-employed) reported usually working paid overtime at their main job—an average of 5.4 extra hours per week (Chart 2.1, Table 2.1). Male nurses were much more likely to put in such extra time; 37% worked an average of 6.5 paid overtime hours per week. Compared with the overall employed population, far higher proportions of nurses of both sexes worked paid overtime.

RNs were more likely than other nurses to have worked paid overtime. About one-third (32%) had done so, for an average of 5.3 extra paid hours a week. Although LPNs were less likely than other nurses to have worked paid overtime, their average overtime hours were slightly higher, at 5.9 per week.

Working paid overtime was more common among nurses whose main job was in a hospital (37%) than among those employed elsewhere. Although the proportion for nurses in long-term care facilities was lower (20%), the average number of paid overtime hours they worked per week (6.0) exceeded that worked by nurses in other work settings. The likelihood of working paid overtime was relatively high for nurses in the territories, New Brunswick, British Columbia and Alberta, and lower for nurses in Prince Edward Island, Ontario, and Newfoundland and Labrador. In the territories, nurses who worked paid overtime averaged 13.2 extra hours per week; this compares with an average of 4.2 hours in Prince Edward Island.

Percentage of nurses and all employed people working paid and unpaid overtime, by sex, Canada, 2005



* Significantly different from estimate for All employed females/males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2003 Workplace and Employee Survey, employee file.

Unpaid overtime (Appendix Table 8)

Among Canadian nurses, unpaid overtime was even more common than paid overtime. Nearly half reported usually working unpaid overtime at their main job, for an average of 4 such hours per week (Chart 2.1, Table 2.1). Just over half of RNs typically worked unpaid overtime.

Although male nurses were more likely than their female colleagues to report paid overtime, the situation was reversed for unpaid overtime. Half of female nurses (50%) said they worked unpaid overtime, versus 41% of male nurses. And compared with female employees overall (26%), female nurses were about twice as likely to work unpaid overtime. The difference between male nurses and male employees overall is less pronounced, but remains striking: 41% and 30%, respectively, reported “usual” unpaid overtime.



The picture changes somewhat, though, when considering the average number of hours of unpaid overtime. Both female and male nurses who worked unpaid overtime averaged about 4 hours a week. This compares favourably with the higher averages of 6.1 hours and 8.9 hours, respectively, for all employed females and males who worked unpaid overtime.

Nurses in the 45-to-54 age group were more likely than their colleagues in other age groups to have usually worked unpaid overtime at their main job: 53% of them did so, for an average of 4.3 hours per week. Of nurses younger than 35, a substantial, but significantly lower proportion (45%), usually worked unpaid overtime and they averaged 3.3 such hours per week.

Unpaid overtime was more common in Alberta, Manitoba and Ontario. Over half of nurses in these provinces reported usually working unpaid overtime at their main job.

Expectations for paid and unpaid overtime

(Appendix Table 8)

When nurses were asked about their main job, “Do you feel your employer expects you to work overtime?”, nearly half (46%) of them replied affirmatively (Table 2.1). Male nurses were more likely than their female colleagues to report this expectation: 55% versus 46%. RNs were more commonly expected to work overtime (48%) than were LPNs (41%) and RPNs (35%). Nurses working in hospitals were more likely (49%) to report employer expectations of overtime than those in community health settings (37%), and other work settings (38%).

Quebec nurses were more likely to report expectations of overtime than were nurses in the rest of the country. More than 6 in 10 nurses in this province said they were expected to work overtime for their main job, compared with about 4 in 10 elsewhere.

Total employment

If the “norm” is a full-time, full-year, permanent paid job, then having more than one job may indicate precarious employment. In 2005, 1 nurse in 5 had at least one job in addition to their main nursing job. Most of these additional jobs were also in nursing.

More than one job (Appendix Table 9)

The proportions of female and male nurses with more than one job far exceeded the figures for the total populations of employed women and men. In nursing, 19% of women had more than one job, double the figure for employed women overall (9%) (Chart 2.2). The likelihood of multiple jobs was even higher among male nurses, at 23% versus 9% of all employed men.

table

Overtime at main job,[†] by sex, type of nurse and work setting, Canada, 2005

2.1

	Paid overtime		Unpaid overtime		Employer expects overtime	Total hours
	Usually works paid overtime	Average hours per week	Usually works unpaid overtime	Average hours per week		Average usual hours per week including overtime
	excluding self-employed					paid and unpaid
	%		%		%	Number
Total nurses	30.4	5.4	49.2	4.0	46.3	35.7
Sex						
Female nurses	30.0*	5.3*	49.7*	4.0*	45.8	35.6
All employed females (age 21+)	13.3	3.3	26.1	6.1	n/a	35.7
Male nurses	37.2*	6.5	41.2*	4.1*	54.7	38.8*
All employed males (age 21+)	27.7	5.8	29.9	8.9	n/a	44.1
Type of nurse						
RN	32.0	5.3	52.2	4.1	47.7	36.0
LPN	24.2	5.9	37.0	3.2	41.4	34.4
RPN	27.1	5.6	50.2	4.0	34.9	37.6
Work setting						
Hospital	37.4	5.3	48.9	3.4	49.1	36.3
Long-term care facility	20.2	6.0	48.0	3.7	48.4	33.9
Community health setting	25.5	5.5	52.0	4.3	37.4	35.3
Other[‡]	14.8	5.5	49.4	7.0	38.4	36.0

[†] Nursing job with the most hours per week (see Definitions).

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

* Significantly different from estimate for All employed females/males (p < 0.05).

n/a: not available.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Labour Force Survey (October, usual hours); 2003 Workplace and Employee Survey, employee file (overtime hours); 2005 Canadian Community Health Survey, cycle 3.1 (total hours).

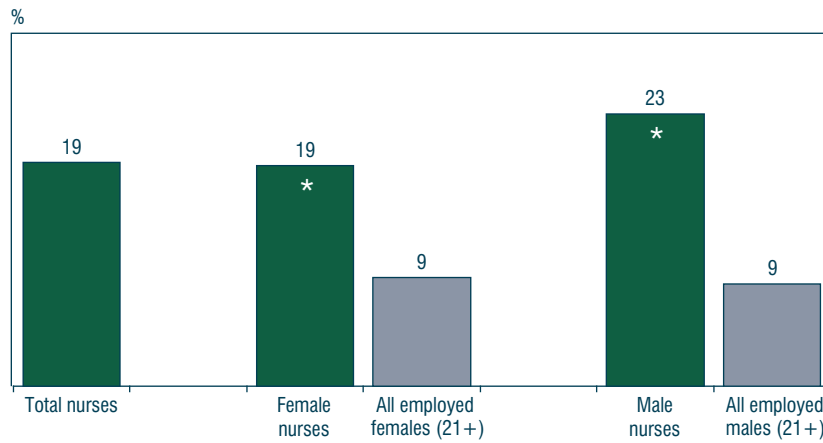
Among nurses with only temporary jobs, 1 in 4 (25%) had more than one job, while about 1 in 6 nurses (17%) with permanent jobs were multiple job holders (data not shown). Just under one-third (32%) of the nurses with “casual” or “on-call” status had multiple jobs, similar to the figure for self-employed nurses (36%) (data not shown).



chart

2.2

Percentage of nurses and all employed people with multiple jobs, by sex, Canada, 2005



* Significantly different from estimate for All employed females/males ($p < 0.05$)

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

The likelihood that nurses would be multiple job holders varied by type of nurse, work setting and age. A smaller proportion of RNs (18%) had more than one job, compared with RPNs (26%) and LPNs (21%). Nurses in hospitals were less likely than nurses elsewhere to have more than one job. And nurses aged 55 or older were less likely to be multiple job holders: 15% versus about 20% of other nurses younger than 55.

Distinct geographic differences emerged in multiple job holding. Nurses in provinces east of Ontario were generally less likely to have more than one job, while those located west of Ontario were more likely to be in that situation. The proportion of nurses in Northern Canada with more than one job was high: 35%, although this figure is partially a reflection of the method by which nurses were identified as employed in the territories for the survey (see Definitions). Those who indicated that they had worked in the territories for any length of time during the year before the survey were categorized as employed there, even though they may also have worked somewhere else in Canada for a higher number of hours per week.

Total hours at all jobs (Appendix Table 10)

For nurses overall (that is, those with one, as well as those with more than one job), the average number of total weekly hours across all jobs for nurses was 38.2. Female nurses averaged an hour more per week than all employed women (37.9 versus 36.9) (Table 2.2). By contrast, the average for male nurses fell about 3 hours short of that for all employed men (42.3 versus 45.5).

table

Nurses' total weekly hours at all jobs, by sex, type of nurse, age group and work setting, Canada, 2005

2.2

	Average weekly hours at all jobs combined	Usually works more than 40 hours per week at all jobs combined
		%
Total nurses	38.2	37.1
Sex		
Female nurses	37.9*	36.7*
All employed females (age 21+)	36.9	24.9
Male nurses	42.3*	44.2*
All employed males (age 21+)	45.5	51.1
Type of nurse		
RN	38.3	38.5
LPN	37.5	30.8
RPN	40.8	43.9
Age group		
Younger than 35	38.6	37.4
35 to 44	38.2	36.7
45 to 54	39.3	40.1
55 or older	35.4	31.6
Work setting		
Hospital	38.5	39.0
Long-term care facility	36.5	31.3
Community health setting	37.9	32.7
Other†	39.1	40.4

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

* Significantly different from estimate for All employed females/males (p < 0.05).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Long-term care facility nurses worked shorter weeks (36.5 hours, on average) at all their jobs combined than did those employed in other settings. They were also less likely than nurses employed in other settings to work more than 40 hours per week.

The total average number of hours that nurses worked at all their jobs combined was markedly higher in the territories (56.2), and was also higher (about 40) in British Columbia, Saskatchewan, Nova Scotia, Newfoundland and Labrador and Ontario, when each geographic area was compared with the rest of the country. Somewhat lower total hours were reported by nurses in Quebec and Prince Edward Island.



Work schedule

Notice of hours (Appendix Table 11)

Just under half of nurses always knew what hours they would be expected to work; that is, they had unlimited advance knowledge of their work schedule. However, over two-thirds of nurses knew their schedule at least one month ahead of time. About 1 in 10 had advance notice of only a week or less.

Unlike nurses, employed women and men overall tended to know their weekly work schedule well into the future. Fully 77% of the total female employed population and 84% of their male counterparts had unlimited advance notice of their upcoming hours, while substantially lower proportions of nurses did so: 49% of female nurses and 45% of male nurses. For shorter notice, however, employed women fared slightly worse than female nurses. One in eight (12%) of all employed women were given no more than a week's notice, compared with 10% of female nurses.

Of course, advance notice of working hours depends on a nurse's employment status. Not surprisingly, only a small percentage of nurses who worked on a casual or on-call basis (16%) were aware of their schedules more than a month in advance (data not shown). And nurses with part-time jobs were less likely to have this much notice, compared with those in full-time positions. Fewer than 6 in 10 (57%) of those with part-time jobs had more than a month's notice, compared with 8 in 10 nurses (79%) with full-time jobs (data not shown).

LPNs were less likely than other nurses to have unlimited advance notice of their hours; less than half (44%) of them knew what their weekly work schedule would be, compared with 50% of RNs and 68% of RPNs. Nearly one-sixth (16%) of LPNs were given no more than a week's notice of their hours, compared with 8% of RNs and 6% of RPNs. Nurses in hospitals were less likely than those elsewhere to have unlimited advance notice of their hours. Short notice of working hours (a week or less) was more common for nurses in long-term care facilities than for those employed elsewhere.

Nurses in Ontario, Newfoundland and Labrador, and Nova Scotia were less likely than their colleagues working in other parts of the country to have unlimited advance notice of their work schedule. Only 41% of Ontario nurses had such knowledge. Having no more than a week's notice was more common in Quebec and Newfoundland and Labrador than elsewhere. About one-sixth (16%) of Quebec nurses and 14% of those in Newfoundland and Labrador reported this situation.



Mixed shifts (Appendix Table 12)

According to the NSWHN, nearly 4 in 10 nurses (38%) worked mixed shifts for their main job; that is, some combination of days, evenings or nights. However, it is possible that this figure underestimates the true extent of mixed shift work. The estimate is based on nurses' responses to the question, "Do you usually work days, evenings or nights?" Although "mixed" was included on the interviewer's questionnaire, only the three response categories (days, evenings and nights) were actually read to the respondents. So it is possible that some nurses may have been misclassified; for example, nurses who reported that they usually worked days may have also worked some combination of other shifts. Nearly half of all nurses (46%) indicated that they usually worked days. And almost equal proportions (8% and 7%, respectively) usually worked nights or evenings.

As the age of nurses rose—probably in parallel with their seniority on the job—so did their likelihood of working days. Beyond age 44, over half of nurses usually worked days, compared with less than one-third (31%) of those younger than 35 (Table 2.3).

Just over one-third of LPNs (36%) usually worked days, a considerably lower figure than those for RNs (49%) and RPNs (47%). LPNs were more likely than other nurses to work mixed shifts: 43% of them usually worked a combination of days, evenings or nights; 37% of RNs did so. LPNs were also more likely than other types of nurses to usually work evenings. Similar proportions of LPNs and RNs worked nights as their usual shift (both 8%).

Relatively low proportions of nurses in hospitals and long-term care facilities (around one-third) worked days as their usual shift. The most common arrangement for hospital nurses was mixed shifts (48%), a higher share than that for nurses employed outside hospitals. In long-term care facilities, just over one-third (35%) of nurses usually worked mixed shifts, and they were far more likely than those in other work settings to usually be assigned an evening shift.

The organization of shifts also differs markedly in Quebec, where nurses were more likely to usually work a particular shift (days, evenings or nights) and were thus less likely to work mixed shifts. The majority of nurses in Quebec usually worked days, as did nurses in the territories.

Length of shift (Appendix Table 12)

Nurses were defined as working a 12-hour shift if they normally worked 12 or more hours per shift at their main job. Most nurses (93%) worked shifts that did not vary in length, and for them, working 12-hour shifts was fairly common (data not shown). Over 1 in 4 (27%) reported that their usual shift was 12 hours. Virtually all (97%) of those whose usual shift was less than 12 hours worked 8 hours or less per shift.



Nurses who usually worked nights, along with those who usually worked mixed shifts, were far more likely to work 12-hour shifts, compared with nurses who usually worked days. Over 4 in 10 of those who worked nights and over half of those who worked mixed shifts worked 12-hour shifts, compared with just 9% of those who worked days (data not shown).

The likelihood of working 12-hour shifts was higher among RNs (29%), compared with LPNs (22%) or RPNs (18%).

Just as working mixed shifts was less common after age 44, working 12-hour shifts also declined with age. Over one-third of nurses under age 35 (36%) worked 12-hour shifts, as did 30% of those aged 35 to 44. By ages 45 to 54, 12-hour shifts were reported by 1 in 4 nurses, and at ages 55 or older, the proportion fell to 18%.

table

Usual type of shift and length of shift for main job,[†] by selected characteristics, Canada, 2005

2.3

	Days	Evenings	Nights	Mixed	Length of shift 12 or more hours [‡]
	%	%	%	%	%
Total nurses	46.0	7.5	8.2	38.4	27.3
Type of nurse					
RN	48.5	6.2	8.1	37.1	28.8
LPN	35.8	12.3	8.5	43.3	22.1
RPN	46.6	6.8	5.9	40.8	17.5
Age group					
Younger than 35	31.0	9.8	11.2	48.0	36.0
35 to 44	44.8	6.0	8.6	40.6	30.4
45 to 54	52.3	7.0	6.8	33.8	24.2
55 or older	53.2	7.8	6.6	32.4	18.4
Work setting					
Hospital	35.3	6.6	10.2	47.9	41.1
Long-term care facility	37.4	16.9	10.5	35.2	10.8
Community health setting	80.7	2.4	1.7 ^E	15.3	2.8 ^E
Other[§]	73.1	4.1	2.0 ^E	20.8	7.2

[†] The nursing job with the most weekly hours (see Definitions).

[‡] Excludes nurses who work shifts of various hours' length (7% of nurses).

[§] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data source: 2005 National Survey of the Work and Health of Nurses.



Nurses employed in hospitals were far more likely than those in other settings to work 12-hour shifts; 41% of hospital nurses worked shifts of this length, compared with 11% of those in long-term care facilities, and still smaller shares of nurses employed elsewhere.

The proportions of nurses who worked 12-hour shifts varied widely across the country. In Quebec, 12-hour shifts were rare—reported by only 3% of nurses in that province. In sharp contrast, fully 60% of nurses in Newfoundland and Labrador reported that their usual shift was at least 12 hours' duration.

Shift changes (Appendix Table 13)

One-third (34%) of nurses reported that their shift for their main job had changed at least once in the previous two weeks. LPNs were more likely than other nurses to have undergone at least one shift change. LPNs were also more likely to have experienced two or more (27%), or even three or more (13%), shift changes. Although the proportion of RNs whose shifts had changed three or more times in the previous two-week period was significantly lower than that for other nurses, it was substantial, at 11%.

The likelihood of changing shifts also depended somewhat on employment status. Although about 1 in 6 nurses (16%) who worked on a casual or on-call basis had experienced three or more shift changes within the previous two weeks, the proportion of nurses with permanent jobs reporting such changes was not much lower—11% (data not shown).

Shift stability was greater at older ages. More than 70% of nurses 45 or older had not had a shift change in their main job over the previous two weeks. By contrast, nearly one-third of nurses younger than 35 reported two or more shift changes, and nearly one in six (15%) said they had had three or more.

Flexible work options (Appendix Table 14)

Just under four-tenths of nurses reported that their employer offered flexibility in the days that they worked, and 3 in 10 said they had some say in their hours. Higher proportions of female than male nurses reported flexibility in both days and hours worked.

RNs were more likely than other types of nurses to report employer-offered flexibility for both days and hours. Nurses in long-term care facilities and in hospitals tended to have less flexibility in their days and hours of work, compared with nurses in community health, or other settings.

Ontario nurses were more likely than nurses elsewhere in the country to have flexibility in the choice of days worked, while Alberta nurses were more likely than others to report some latitude in their choice of hours.



Employer-supported programs (Appendix Table 15)

Nurses were asked about five types of employer-support possibly available to them at their main job. Help for childcare, meaning an on-site centre or assistance with external arrangements, was considered. The question about employee assistance programs included counselling, substance abuse control, financial assistance and legal aid. Three “healthy living” options were also assessed: fitness and recreation services; access to a place to purchase healthy food; and, more specifically, access to a place to purchase healthy food during shifts worked.

Childcare (Appendix Table 15)

One in eight nurses (12%) reported the availability of employer-supported childcare assistance in 2005, higher than the figure for the total employed population (about 7%). A larger proportion of RNs (13%) than LPNs or RPNs (both 8%) reported having childcare options at their main job. Hospital nurses were much more likely to have such help available: 15% reported access to childcare, compared with 3% of nurses in community health settings, 7% in long-term care facilities, and 10% in other settings.

Quebec nurses were far more likely than their counterparts in the rest of the country to report having access to employer-supported childcare. While one-quarter of nurses in Quebec (26%) had such help available, elsewhere the proportions ranged from 2% in Newfoundland and Labrador to only 14% in Manitoba.

Employee assistance (Appendix Table 15)

Access to employee assistance at their main job was reported by about 8 in 10 nurses. This proportion was over twice as high as the estimate for the total employed population. Among employed women and men aged 21 or older, about 30% reported access to employee assistance programs, compared with 79% and 83% of female and male nurses, respectively.

Similar to the pattern for childcare, LPNs were less likely to have access to employee assistance (71%); this compares with RNs (81%) and RPNs (89%). While close to 9 in 10 hospital nurses (86%) had access to employee assistance, percentages were much lower among nurses in long-term care or other work settings (both 65%).

Although nurses in Quebec had the best access to employer-supported childcare, they, along with those in Ontario, were less likely than nurses elsewhere to have employee assistance available at their main job. About three-quarters of Quebec and Ontario (76%) nurses had access to employee assistance; elsewhere, availability was as high as 88% (the territories and Saskatchewan).



Fitness and recreation services (Appendix Table 15)

Employer-supported fitness and recreation services were available to one-third of Canadian nurses. Although the proportions for male (37%) and female (34%) nurses who reported having such facilities are similar, the comparison with the overall employed population is more striking. Only 18% of all employed men and 15% of the women stated that their employer offered fitness/recreation services—both figures significantly lower than those for nurses.

Again, availability of this workplace perk was lower for LPNs (26%) than for RPNs and RNs (both 36%). Hospital nurses were twice as likely (41%) as those in long-term care or community health settings (20%) to report having access to fitness/recreation facilities.

Across the country, reports of fitness/recreation services were most common among nurses in the Prairie provinces and least so in the territories and British Columbia.

Food availability (Appendix Table 15)

Just over half of all nurses said they could buy nourishing food from a workplace vendor. Given that many usually work nights or evenings, it is not surprising that the proportion dropped to 39% when nurses were asked if they could buy nourishing food during the shifts they worked.

Hospital nurses were far more likely than those employed elsewhere to report having a place to buy nutritious food at work. Even so, only 64% of them reported such availability and 47% reported access to healthful food during the shifts they worked.



Nursing care—quality, risks
and workload pressures

Chapter 3

Nursing care involves close contact with patients, and nurses thus have a unique perspective on the quality of care their patients receive. To probe this issue, the 2005 National Survey of the Work and Health of Nurses (NSWHN) asked nurses for their perceptions of issues pertaining to care provided—the adequacy of staffing, role overload, and the occurrence among patients of adverse events such as medication errors and falls. The survey also asked nurses about on-the-job risks to themselves; for example, from exposure to infectious diseases, on-the-job injury, physical assault, emotional abuse, and needlestick injury.

Quality of care

Nurses were asked about problems with the quality of care delivered during their last shift worked. The questions covered adequacy of staffing and the level of patient care provided—by the nursing team and by the individual nurse.



Inadequate staffing (Appendix Table 16)

More than one-third (38%) of nurses reported inadequate staffing, and such reports were more common among LPNs than among RNs and RPNs (Table 3.1).

Perceptions of staffing inadequacy varied widely according to where nurses were employed, as well as the shift worked. Those in long-term care facilities or hospitals were more likely than nurses employed elsewhere to report insufficient staff during their last shift worked. And reports of inadequate staffing were more common among nurses who had worked an evening shift rather than a day or night shift.

Team and individual care (Appendix Table 16)

Although 1 in 8 nurses reported that their team had provided fair or poor patient care, only 1 in 25 reported that they themselves had delivered this level of care (Table 3.1). Younger nurses (those up to 35) were more likely than their older counterparts to say that their team had given fair/poor care during their last shift. Nurses aged 55 or older were less likely than younger nurses to state that the quality of care their team had provided was lacking or that they themselves had given fair or poor care.

The proportions of nurses in long-term care facilities and hospitals who reported fair/poor team patient care were about twice as high as the corresponding proportions of nurses in community health, or other settings. Nurses in long-term care facilities and hospitals were also more likely to report that they themselves had provided fair or poor care.

table

Percentage of nurses reporting problems with quality of care during last shift, by work setting, Canada, 2005

3.1

	Staffing level inadequate	My nursing team [†] delivered fair or poor care	I delivered fair or poor care
	%	%	%
Total nurses (providing direct care)	37.7	11.9	4.3
Work setting			
Hospital	38.7	12.5	4.8
Long-term care facility	47.3	14.8	5.7
Community health setting	30.6	7.7	2.2 ^E
Other [‡]	21.9	5.4 ^E	1.6 ^E

[†] Excludes nurses who did not work on a team.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data source: 2005 National Survey of the Work and Health of Nurses.



Nurses in British Columbia were more likely than those elsewhere to report fair or poor team care: 16% compared with proportions ranging from 4% to 9% in Prince Edward Island, Nova Scotia and Newfoundland and Labrador. British Columbia nurses, along with those in Saskatchewan, were also more likely to report that they as individuals had given poor or fair care.

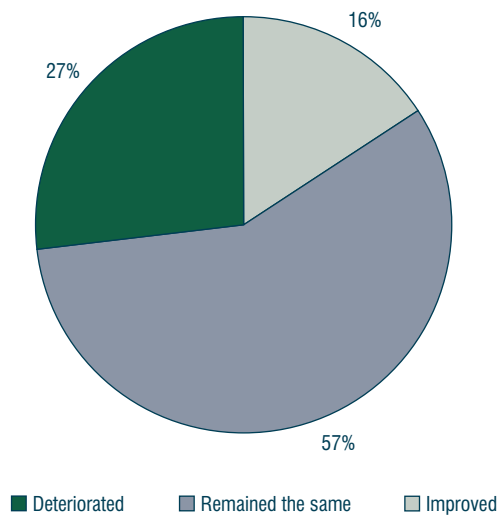
Positive and negative changes (Appendix Table 17)

The survey also asked nurses if they thought that the quality of care delivered in their workplace had changed over the past year. More than half (57%) felt that the quality had remained the same, and reports of deterioration were more common than perceptions of improvements (Chart 3.1, Table 3.2). Hospital nurses were more likely than those working in other venues to report deteriorating patient care and less likely to report improvement.

chart

3.1

Percentage distribution of nurses, by reported changes in quality of patient care at workplace in past 12 months, Canada, 2005



Note: Based on nurses who provide direct care.

Data source: 2005 National Survey of the Work and Health of Nurses.



table

3.2

Percentage of nurses reporting changes in quality of patient care at workplace in past 12 months, by work setting, Canada, 2005

	In past 12 months, quality of care		
	Improved	Remained the same	Deteriorated
	%	%	%
Total nurses (providing direct care)	15.8	57.2	27.0
Work setting			
Hospital	12.1	57.1	30.8
Long-term care facility	18.9	53.6	27.5
Community health setting	22.8	60.2	17.0
Other†	26.2	61.1	12.8

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.
 Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).
 Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.

British Columbia nurses were more likely than their counterparts elsewhere in the country to report a deterioration in the quality of care. More than one-third (35%) of BC nurses reported a deterioration in care—over twice as high as the proportion in Prince Edward Island (15%).

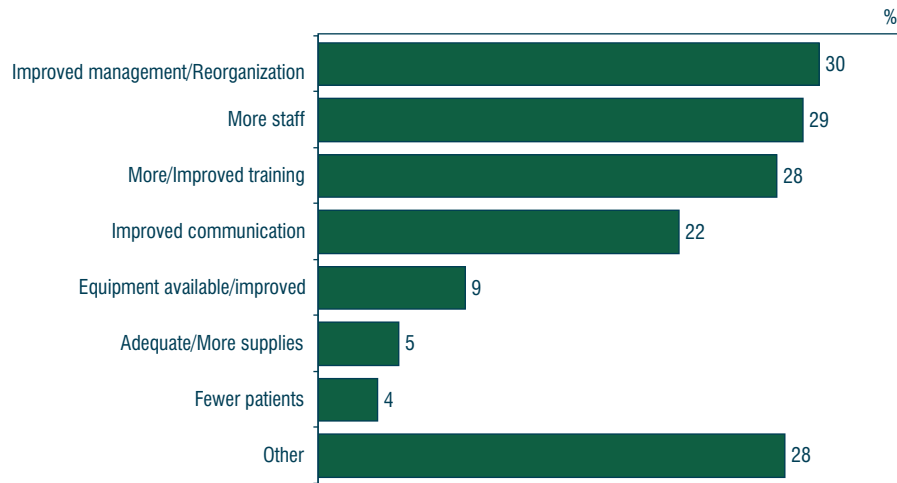
Reasons given for changes in quality of care

About 3 in 10 nurses who reported an improvement in the quality of patient care credited improved management or reorganization, more staff, or more or improved training (Chart 3.2). Changes in staffing emerged as a major determinant of both positive and negative changes in quality of care. While more staff was commonly mentioned as a reason for improvement, having fewer staff stood out among nurses' explanations for deteriorating care: two-thirds (67%) who reported a decline in the quality of patient care gave this as a reason behind the decline (Chart 3.3). "Too many patients," cited by 38% of nurses, was the second most common reason given for deteriorating care. (Information on the reasons categorized as "other" is not available.)

chart

3.2

Reasons given for improvement in quality of patient care in past 12 months,† Canada, 2005



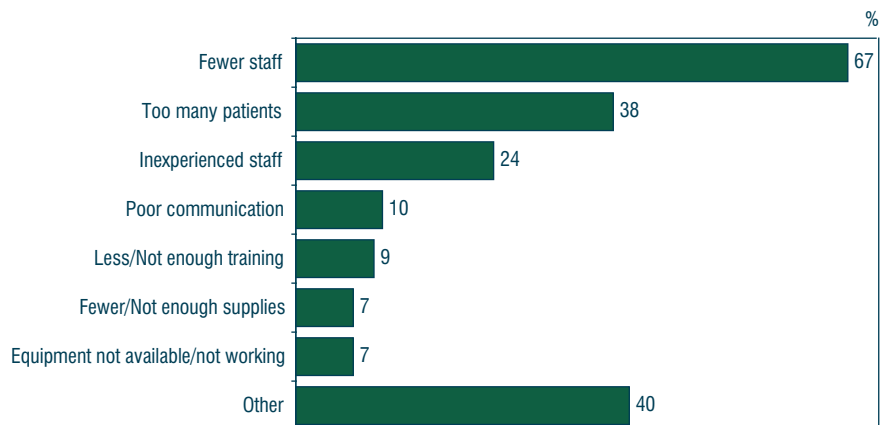
Notes: Based on nurses who provide direct care. Because nurses could report more than one reason, detail adds to more than 100%.
 † Among the 16% of nurses who reported an improvement.

Data source: 2005 National Survey of the Work and Health of Nurses.

chart

3.3

Reasons given for deterioration in quality of patient care in past 12 months,† Canada, 2005



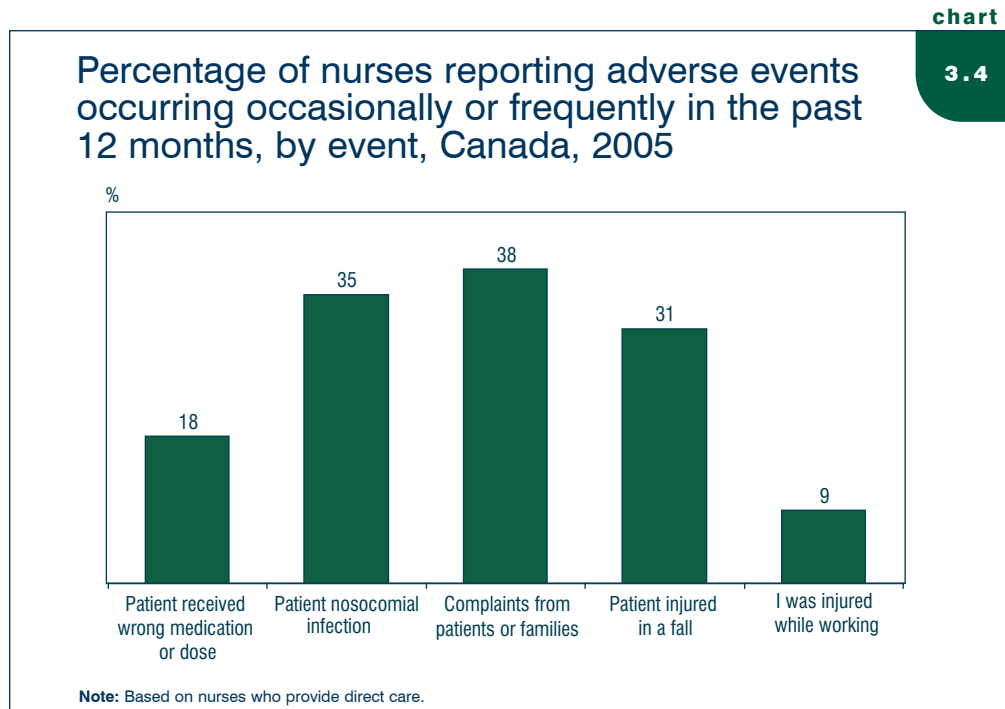
Notes: Based on nurses who provide direct care. Because nurses could report more than one reason, detail adds to more than 100%.
 † Among the 27% of nurses who reported a deterioration.

Data source: 2005 National Survey of the Work and Health of Nurses.



Adverse events (Appendix Table 18)

Nurses' reports of "adverse events" cover five items that occurred "occasionally or frequently" in the year before their survey interview: erroneous medication or dose, nosocomial infection, complaints, patient injured in a fall, and the nurse's own injury on the job.



Data source: 2005 National Survey of the Work and Health of Nurses.

Medication errors (Appendix Table 18)

When nurses were asked, regarding the patients they directly cared for, "In the past 12 months, how often would you say a patient received the wrong medication or dose?", 18% reported that such incidents had occurred "occasionally" or "frequently" (Chart 3.4). The percentage of RPNs who reported such mistakes (15%) was slightly lower than the percentage of RNs and LPNs (both 18%).

Partly as a reflection of the differences in nursing tasks in different work settings, medication errors were far more likely to be reported by nurses in long-term care facilities (23%) or hospitals (19%), than in community health (8%), or other settings (9%) (Table 3.3).



Over one-quarter (27%) of nurses employed in Quebec reported occasional or frequent medication errors among patients in their care, strikingly higher than nurses employed elsewhere. Outside Quebec, the percentage of nurses reporting occasional or frequent medication errors ranged from 7% in Newfoundland and Labrador to 18% in British Columbia.

Nosocomial infections (Appendix Table 18)

Over one-third (35%) of nurses reported occasional or frequent nosocomial infections—an infection that originates in a hospital or similar setting—in their patients (Chart 3.4).

Nurses employed in hospitals and long-term care facilities were twice as likely to report nosocomial infection as nurses in community health, and other settings (Table 3.3).

Similar to the pattern for medication errors, Quebec nurses were more likely (42%) than those employed elsewhere to report occasional or frequent nosocomial infection in their patients; proportions were relatively low in the territories (18%), and around 30% in Alberta, Newfoundland and Labrador, New Brunswick, Saskatchewan, and Prince Edward Island.

Complaints from patients or families (Appendix Table 18)

Close to 4 out of 10 nurses said occasional or frequent complaints from their patients or their patients' families had been received in the past year (Chart 3.4). Nurses in hospitals and long-term care facilities were more likely to report complaints than were nurses in community health, or other settings (Table 3.3).

Patients injured in a fall (Appendix Table 18)

Just under one-third (31%) of nurses said that occasionally or frequently a patient in their care in the past year had been injured in a fall (Chart 3.4). Probably reflecting the greater frailty of their patients, nurses in long-term care facilities were much more likely to report occasional or frequent injurious falls (63%) than were their colleagues in hospitals, community health settings or elsewhere.

Nurses' own injuries (Appendix Table 18)

About 9% of nurses reported having been injured on the job in the past year; the occurrence of injury did not differ by sex (Chart 3.4). The proportion of hospital nurses who sustained a work injury was 11%, similar to the proportion of nurses in long-term care facilities (10%) (Table 3.3). Work injuries were much less common among nurses in community health, or other settings.



Nurses in British Columbia and in Saskatchewan were more likely than those in the rest of the country to have been injured on the job: 1 in 8 BC nurses (12%) and nearly this share of Saskatchewan nurses (11%) reported being injured—about twice the proportion in Prince Edward Island (1 in 20). The likelihood of injury was also relatively low for Quebec nurses (7%).

table

Percentage of nurses reporting adverse events occurring occasionally or frequently in past 12 months, by work setting, Canada, 2005

3.3

	In past 12 months, occurred occasionally or frequently				
	Patient received wrong medication or dose	Patient nosocomial infection	Complaints from patients or families	Patient injured in a fall	I was injured while working
	%	%	%	%	%
Total nurses (providing direct care)	17.9	35.2	38.3	31.0	8.9
Work setting					
Hospital	19.2	39.5	39.9	26.1	10.6
Long-term care facility	22.8	36.0	50.7	63.4	9.6
Community health setting	7.8	15.1	23.5	15.4	3.6
Other [†]	9.3	17.9	23.2	17.4	2.8 ^E

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.
 ■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).
 ■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).
 E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data source: 2005 National Survey of the Work and Health of Nurses.

Other risks for nurses

Needlestick or other sharps injury (Appendix Table 19)

Nearly half (48%) of nurses who provided direct care reported having ever had a needlestick or other sharps (for example, scissors, scalpels, razors) injury from an object that had been contaminated by use on a patient, and 11% reported having had such an injury in the past year.

Over half of RNs reported ever having been injured with a contaminated needlestick or other sharps; this compared with around a third of LPNs and RPNs. The greater extent to which RNs' jobs involve handling sharps probably explains these differences. Nurses in hospitals were more likely (52%) than those in other settings to have been injured by a needlestick or other sharps, while those in long-term care facilities were less likely (37%).

Needlestick/other sharps injuries were reported far more frequently by nurses in Quebec than by those employed elsewhere. An estimated 58% of Quebec nurses reported ever having had such an injury; this figure compared with 40% to 47% in other parts of the country.

Lifting or transferring patients (Appendix Table 20)

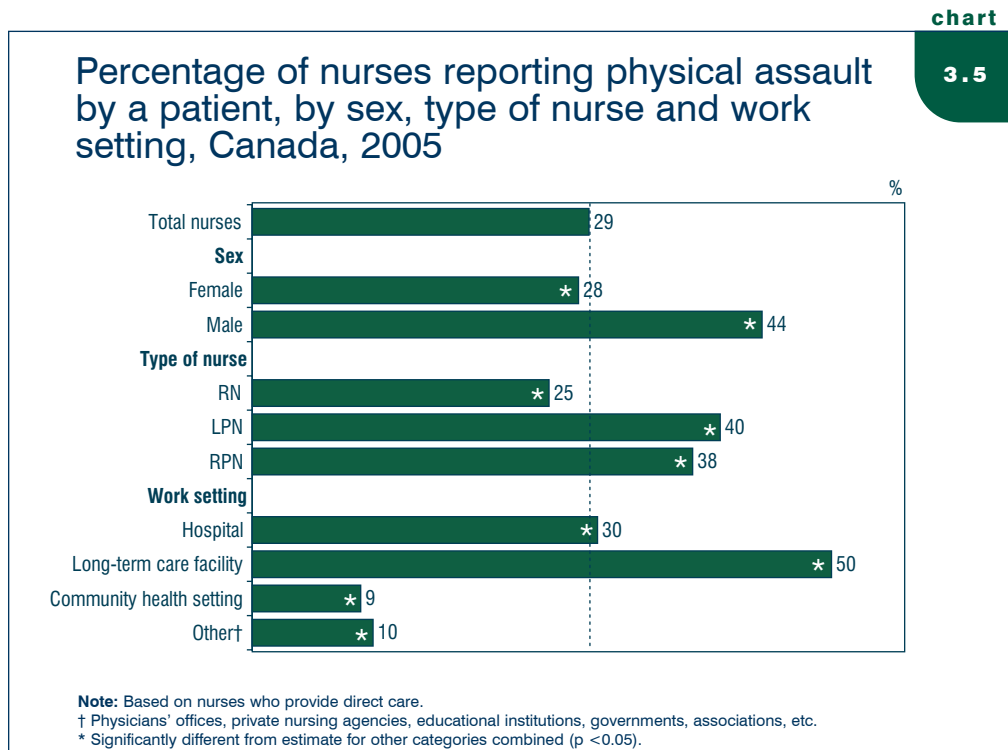
Nearly four-fifths of nurses who provided direct care were required to lift or transfer patients, though this was more common for male (83%) than female (77%) nurses. LPNs were much more likely than other types of nurses to have jobs involving these tasks (84% versus 76% of RNs and 50% of RPNs).

Over 6 in 10 of the RNs who were required to lift or transfer patients always had access to mechanical lifting devices, but 36% said that the equipment was not always available. Access to such equipment was better among LPNs and RPNs (88% and 74%, respectively) who were involved in lifting or transferring patients.

Less than half (46%) of nurses in the territories whose jobs involved lifting or transferring had access to mechanical lifting devices; access was also relatively limited in Alberta (63%).

Physical assaults (Appendix Table 21)

Over one-quarter (29%) of nurses reported that they had been physically assaulted by a patient in the previous year (Chart 3.5). Male nurses were much more likely (44%) than female nurses (28%) to have faced such assaults. This male-female gap cannot be attributed to differences between the settings in which male and female nurses work, nor to differences by type of nurse. In analysis that controlled for these possible influences, the odds of male nurses reporting physical assault were twice as high as those for their female counterparts (data not shown).





Higher proportions of nurses working in long-term care facilities or hospitals reported that they had been assaulted by a patient than nurses elsewhere: 50% and 30%, respectively, compared with 9% or 10% of nurses in other settings. Compared with RNs (25%), higher proportions of LPNs (40%) and RPNs (38%) reported patient assault.

Emotional abuse at work (Appendix Table 22)

In addition to physical assaults, sizeable proportions of nurses reported that they had endured emotional abuse at work over the past year—from a patient, visitor, physician, or even another nurse.

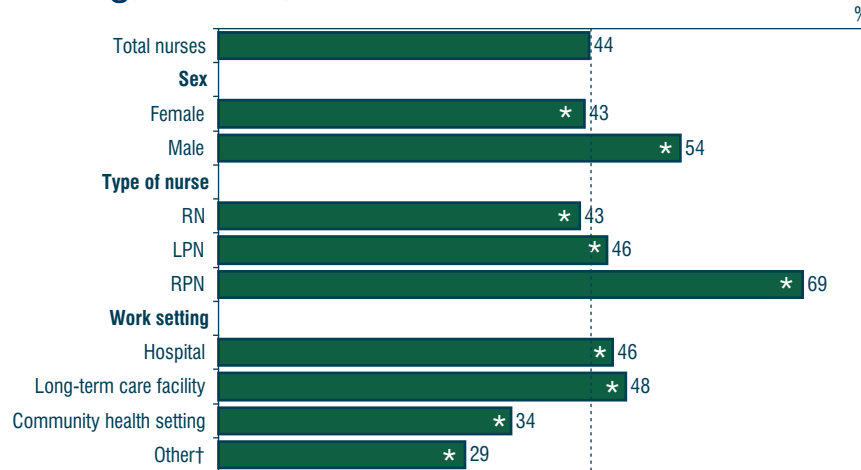
More than 4 out of 10 nurses (44%) who provided direct care reported that they had received emotional abuse from a patient (Chart 3.6). Similar to the pattern for physical assault, male nurses were more likely than female nurses to have made such reports (54% versus 43%). RPNs were considerably more likely than other types of nurses to have been emotionally abused by a patient. Younger nurses were more likely than older ones to report emotional abuse from a patient: about 47% of nurses younger than 45 reported abuse, compared with 38% of those 55 or older.

Emotional abuse from visitors was encountered much less often than emotional abuse from patients, with 1 in 6 nurses reporting visitor incidents. RNs were more likely than other types of nurses to have received abuse from this source. The proportion was also much higher among hospital nurses (20%) than among those employed elsewhere. Relatively few nurses aged 55 or older reported emotional abuse from a visitor.

About 1 in 12 nurses reported that they had been emotionally abused by a physician during the past year. Hospital nurses were far more likely than those employed in other venues to report emotional abuse from a physician—perhaps not surprising because hospital nurses' jobs involve interacting with physicians to a greater degree. An estimated 12% of hospital nurses reported such abuse, compared with 2% to 4% of nurses employed outside hospitals. RNs were more likely than other types of nurses to report emotional abuse from a physician. Nurses aged 55 or older were about half as likely as nurses aged 35 to 44 to report that they had been emotionally abused by a doctor; the respective proportions were 5% and 11%.

Emotional abuse from a nurse co-worker in the past year was reported by 12% of nurses. Such incidents were more common in hospitals or long-term care facilities than in other work settings.

Percentage of nurses reporting emotional abuse from a patient, by sex, type of nurse and work setting, Canada, 2005



Note: Based on nurses who provide direct care.

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

* Significantly different from estimate for other categories in the group combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.

Possible exposure to infectious diseases

(Appendix Table 23)

The risk of exposure to contagious diseases concerned substantial proportions of nurses who provided direct care. An estimated 15% believed that their employer was not taking adequate precautions to prevent the spread of diseases. This perception was more common among male (21%) than female (14%) nurses. Nurses in hospitals were more likely than those working elsewhere to feel that precautions were inadequate (Table 3.4). Higher proportions of nurses in Quebec (19%) and British Columbia (17%) felt that their organizations were not taking sufficient precautions to prevent the spread of contagion.

Over half of nurses (51%) expressed concern about their organization's ability to control an outbreak. Again, the proportion of male nurses with such concerns (60%) was higher than that for their female colleagues (51%).

Nearly half (48%) of nurses worried about their own risk of contracting a serious disease in the workplace. Again, the men in nursing were more likely than the women to express such concerns: 58% versus 47%. More than half of hospital nurses were concerned about their risk of acquiring a serious disease; proportions were lower among nurses in other work settings. The proportion of nurses aged 55 or older with concerns about their personal risk (44%) was slightly lower than the corresponding proportions for nurses in the younger age groups.



Nurses in Quebec and Alberta were less likely than those in other parts of the country to express concern about their risk of contracting an infectious disease in their workplace.

table

3.4

Percentage of nurses concerned about risk of exposure to infectious diseases, by work setting, Canada, 2005

	Concerned about					Average score [†]
	Organization taking inadequate precautions to prevent spread of disease	Organization's ability to control an outbreak	Own risk of contracting a serious disease in workplace	Availability of personal protective equipment during an outbreak	Effectiveness of existing personal protective equipment during an outbreak	
	%	%	%	%	%	
Total nurses (providing direct care)	14.6	51.5	47.8	32.4	44.8	5.9
Work setting						
Hospital	15.5	54.7	52.9	33.3	47.3	6.2
Long-term care facility	14.4	50.1	44.8	34.7	45.5	5.8
Community health setting	14.7	45.3	37.7	30.7	40.3	5.3
Other[‡]	9.0	39.0	30.5	23.8	32.1	4.4

[†] Scores can range from 0 to 15, with higher scores indicating increased concerns about risk of exposure to infectious diseases.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

Data source: 2005 National Survey of the Work and Health of Nurses.

When asked about the availability and effectiveness of personal protective equipment in an outbreak, nearly one-third of nurses (32%) expressed concerns, and 45% were uncertain of the effectiveness of existing equipment. Male nurses were slightly more likely than female nurses to report uneasiness about the availability of protective equipment. Hospital and long-term care nurses were more likely than those elsewhere to be concerned about the availability of personal protective equipment, and hospital nurses were also more likely to be worried about the equipment's effectiveness (Table 3.4). Nurses aged 55 or older were less likely than younger nurses to report concerns about the availability of protective equipment.



Role overload

Extra time to complete work (Appendix Table 24)

Over half (54%) of nurses said that they often arrived at work early or stayed late in order to get their work done (Chart 3.7). An even higher percentage (62%) reported working through breaks (Table 3.5). Hospital nurses were more likely than those employed elsewhere to work through breaks.

Putting in additional hours to finish assigned duties was particularly common for RNs. Over half of them (56%) said they often came in early or stayed late, compared with less than half of LPNs and of RPNs. Similarly, a disproportionately high share of RNs—nearly two thirds (64%)—worked through their breaks; this compares with 55% of LPNs and 54% of RPNs.

Quebec nurses were significantly more likely than their counterparts employed elsewhere to report that they often arrived early or stayed late to complete their work. About 6 in 10 Quebec nurses (59%) reported doing so. As well, high proportions of nurses in Quebec (65%) and Ontario (64%) said they often worked through breaks.

Too much to do (Appendix Table 24)

As well as lengthening the workday and/or missing breaks, many Canadian nurses reported being overloaded in other ways. Two-thirds often felt that they had too much work for one person, and 45% said that they were not given enough time to do what was expected in their job (Chart 3.7). And nearly 6 in 10 reported that because they had so much to do, they could not do everything well. Consistently higher proportions of nurses in hospitals and long-term care facilities reported these three indicators of role overload (Table 3.5).

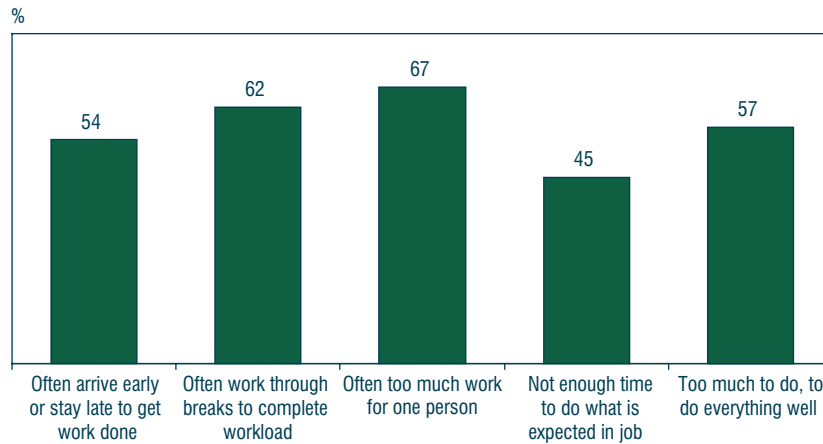
The elements of role overload were fairly consistently observed in higher proportions among nurses in Quebec, compared with those employed elsewhere.



chart

3.7

Percentage of nurses reporting role overload, Canada, 2005



Data source: 2005 National Survey of the Work and Health of Nurses.

High levels of role overload (Appendix Table 24)

A summary score of role overload was calculated, based on the five elements considered in the survey. Scores could range from 0 to 20, with higher numbers indicating higher role overload. Scores that fell within the upper quartile of the weighted distribution of all scores were defined as indicating “high role overload.”

High role overload was more common among nurses in long-term care facilities (32%) or hospitals (29%) than among those in community health (24%) or other settings (21%) (Table 3.5). RNs were more likely than LPNs or RPNs to be categorized as having high role overload; the respective proportions were 29%, 24% and 19%. Role overload was more common among Quebec nurses (34%), and much less common among those in Prince Edward Island and Newfoundland and Labrador (both 18%).

table

Percentage of nurses reporting role overload, Canada, 2005

3.5

	Often arrive early or stay late to get work done	Often work through breaks to complete work	Often too much work for one person	Not given enough time to do what is expected	Too much to do, to do everything well	Role overload	
						Average score [†]	Percentage with high score [‡]
	%	%	%	%	%		%
Total nurses	54.2	62.1	66.9	45.0	57.2	12.1	27.8
Work setting							
Hospital	55.3	64.4	70.3	46.4	61.7	12.5	28.8
Long-term care facility	55.9	61.4	73.1	51.7	62.4	12.5	31.5
Community health setting	50.7	63.4	58.9	41.2	49.2	11.4	24.2
Other[§]	50.4	51.3	51.0	33.4	37.1	10.2	21.1

† Scores can range from 0 to 20, with higher scores indicating higher role overload.

‡ Defined as scores in the top quartile of the weighted distribution.

§ Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

Data source: 2005 National Survey of the Work and Health of Nurses.



Work environment—stress,
collaboration and respect

Chapter 4

The roles and responsibilities of nurses and the conditions in which they work contribute to a level of work stress that distinguishes nursing from other occupations. To provide a glimpse of that atmosphere, the 2005 National Survey of the Work and Health of Nurses (NSWHN) asked nurses questions about job strain, co-worker and supervisor support, job security, autonomy, nurse-physician working relations, and respect. Another set of questions aimed to find out how many nurses were dissatisfied with their jobs, and even with their own profession.

Work stress (Appendix Tables 25 and 26)

Work stress is determined by examining several factors: job strain, co-worker support, supervisor support, physical demands, and job security. In 2005, on most of these measures, nurses compared unfavourably with the employed population overall.

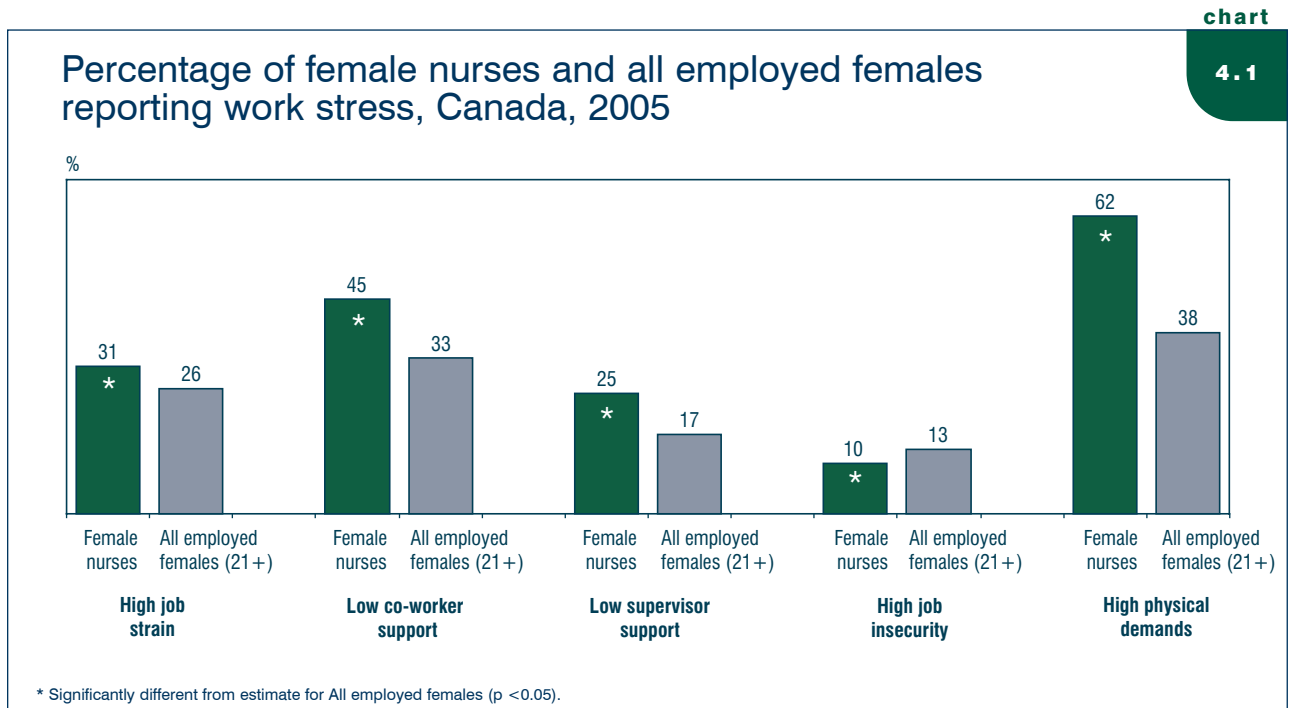


Job strain (Appendix Tables 25 and 26)

Job strain results when the psychological demands of a job exceed the worker's discretion in deciding how to do it (see Definitions). An examination of the individual elements of job strain shows that nurses were more likely than the employed population overall to characterize their jobs as "very hectic," to perceive conflicting demands, to report that their job requires a high level of skill, and that they have to learn new things.

Close to a third (31%) of female nurses found themselves in situations that involved high job strain, whereas the figure for all employed women was 26% (Chart 4.1). The corresponding proportions for men were 27% of nurses and 18% of all employed males (Chart 4.2).

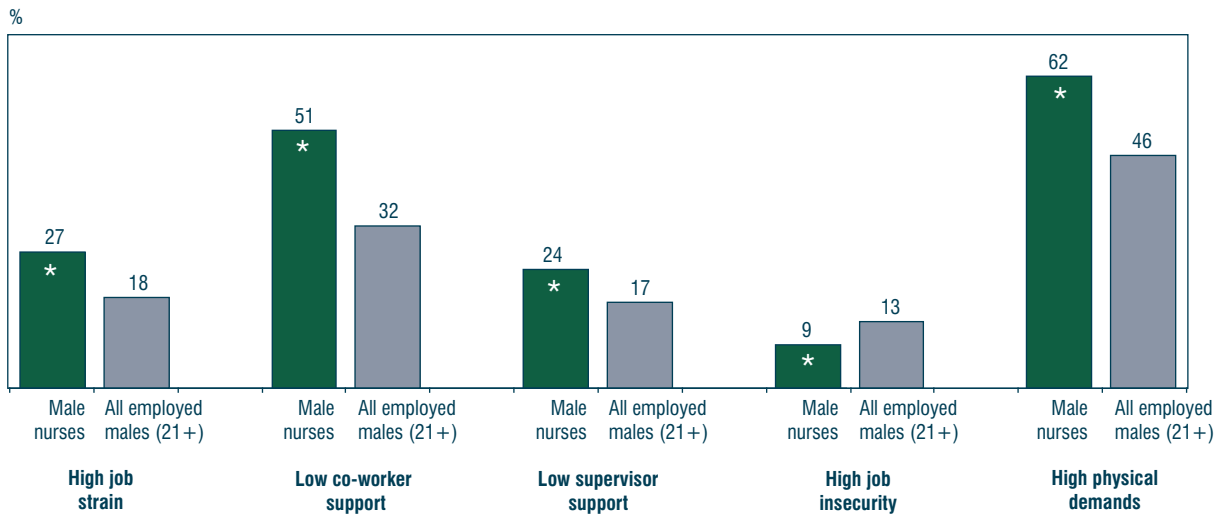
High job strain tended to be more common among LPNs than other nurses, and it was particularly common among nurses in long-term care facilities (38%) and hospitals (33%). Relatively low proportions of nurses in the territories and Quebec reported high job strain.



Data sources: 2005 National Survey of the Work and Health of Nurses; 2002 Canadian Community Health Survey, cycle 1.2.

Percentage of male nurses and all employed males reporting work stress, Canada, 2005

4.2



* Significantly different from estimate for All employed males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2002 Canadian Community Health Survey, cycle 1.2.

Co-worker and supervisor support

(Appendix Tables 25 and 26)

Low support from co-workers and/or supervisors (see Definitions) can contribute to work stress. Substantial shares of Canadian nurses—45% of females and 51% of males—felt they had low co-worker support, while in the employed population overall, the estimate for each sex was around 33% (Charts 4.1 and 4.2). The higher figures for nurses are largely attributable to those who agreed with the statement, “You were exposed to hostility or conflict from the people you worked with.”

Low co-worker support was reported more frequently by RPNs than RNs or LPNs, and it was more common among nurses in long-term care facilities (52%) and hospitals (47%) than among those employed elsewhere (Table 4.1).

While low supervisor support was less prevalent than low co-worker support, about a quarter of nurses had experienced this element of work stress, significantly above the 17% for employed Canadians overall. The problem was more commonly reported by nurses in hospitals than those in other workplaces.



Physical demands (Appendix Tables 25 and 26)

Nurses were far more likely than employed people overall to describe their work as physically demanding (see Definitions). More than 60% of both female and male nurses said their jobs presented high physical demands; the corresponding proportions for the employed population as a whole were 38% of women and 46% of men (Charts 4.1 and 4.2).

High physical demands were more likely to be reported by nurses younger than 45 than by older nurses (Table 4.1). But even at age 55 or beyond, over half of nurses had physically demanding jobs. The proportion of LPNs encountering high physical demands (75%) exceeded the proportions for RNs (60%) and RPNs (45%).

Job security (Appendix Tables 25 and 26)

Nurses compared favourably with the overall employed population on only one element of work stress: job security (see Definitions). This is not unexpected, however, considering the high proportions of nurses with permanent jobs and union coverage. (Although the NSWHN asked nurses about job security generally, it did not address the issue of “bumping,” which happens when a nurse is involuntarily transferred from one clinical specialty area to another.) While 13% of all employed women and men reported low job security, the figures were lower for female (10%) and male (9%) nurses (Charts 4.1 and 4.2).

Hospital nurses were less likely than those employed elsewhere to think that their jobs were in jeopardy: 8% versus 14% (Table 4.1). Differences emerged between nursing groups as well: 15% of LPNs reported low job security, compared with 9% of RNs and 12% of RPNs.

A relatively large proportion of Quebec nurses (13%) reported low job security. This was more than twice the figure for Nova Scotia, and well above the estimates for Alberta and Saskatchewan.

table

Percentage of nurses reporting work stress, by selected characteristics, Canada, 2005

4.1

	High job strain	Low co-worker support	Low supervisor support	Low job security	High physical demands
	%	%	%	%	%
Total nurses	30.7	45.3	25.1	10.4	62.4
Sex					
Female nurses	30.9*	44.9*	25.2*	10.5*	62.4*
All employed females (age 21+)	26.1	32.6	16.7	13.4	37.9
Male nurses	27.1*	51.3*	23.6*	8.7*	62.0*
All employed males (age 21+)	18.1	32.3	17.2	13.4	46.3
Type of nurse					
RN	30.1	45.5	25.3	9.2	59.5
LPN	32.8	43.7	24.5	15.0	75.0
RPN	31.6	52.7	25.1	11.7	45.3
Age group					
Younger than 35	27.4	44.2	23.5	11.0	72.8
35 to 44	32.4	47.0	25.5	11.2	64.9
45 to 54	33.1	47.9	26.7	10.0	58.2
55 or older	27.0	38.7	23.3	9.2	54.2
Work setting					
Hospital	33.2	46.8	27.5	8.0	74.3
Long-term care facility	37.6	51.7	24.8	13.7	66.4
Community health setting	20.1	38.3	21.1	14.1	34.8
Other[†]	20.4	36.4	17.7	13.6	28.7

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

* Significantly different from estimate for All employed females/males (p < 0.05).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2002 Canadian Community Health Survey, cycle 1.2.

Nursing Work Index

The Nursing Work Index (NWI) is a set of measures developed (and subsequently revised) to study the nursing practice environment. (See Aiken LH, Patrician PA, "Measuring organizational traits of hospitals: The Revised Nursing Work Index" in Vol. 49, No. 3 of *Nursing Research*, 2000, 146-53.) The NSWHN incorporated three components of the NWI—autonomy, control over practice, and nurse-physician working relations (see Definitions). Each of the three components was measured by numerous questions that were asked of nurses who provided direct care and were not self-employed.



Autonomy (Appendix Table 27)

To determine nurses' sense of autonomy, the 2005 survey asked them if they disagreed or agreed, either somewhat or strongly, with these statements:

- The supervisory staff is supportive.
- Nursing controls its own practice.
- I have the freedom to make important patient care and work decisions.
- I am not placed in a position of having to do things that are against my nursing judgment.
- I have a nurse manager or immediate supervisor who backs up the nursing staff in decision-making, even if the conflict is with a physician.

A substantial majority of nurses agreed with each statement. The lowest consensus (73%) was with the perceptions that supervisory staff are supportive and that immediate supervisors stand behind nurses' decisions (Table 4.2). On the other hand, a large majority of nurses (85%) agreed that they can make important patient care and work decisions.

The most consistent pattern that emerged in response to the questions measuring autonomy was related to workplace. Significantly low percentages of hospital nurses agreed with each statement, while the percentages of nurses in community health and other settings who agreed were significantly high. For example, while 70% of hospital nurses regarded supervisory staff as supportive, the figure among nurses in community health settings was 82%. Similarly, 71% of hospital nurses felt that they had the support of their immediate supervisor in decision-making, compared with 80% of nurses in community health settings.

Based on the responses to all five questions measuring nurses' perceptions of autonomy, a summary score was compiled for each nurse. Values that fell in the lowest quartile of the weighted distribution of this score were defined as "low autonomy." Thus, 25% of all nurses were categorized as having low autonomy.

Reflecting the pattern of their responses to the individual questions, a significantly high percentage of nurses in hospitals had low autonomy (28%), while the percentages for nurses in community health and other settings were just 15% and 13%, respectively (Table 4.2).

Perceptions of autonomy varied across the country. Nurses in Newfoundland and Labrador (32%), Saskatchewan (29%) and Ontario (27%) were more likely to be categorized as having low autonomy. By contrast, relatively low percentages of nurses in Alberta and Quebec (both 22%) fell in this range.

table

Nursing Work Index: Autonomy among nurses, by work setting, Canada, 2005

4.2

	Percentage agreeing					Autonomy	
	Supervisory staff is supportive	Nursing controls its own practice	Nurse makes important patient care and work decisions	Nurse does not have to do things against nursing judgment	Immediate supervisor backs up nursing staff in decision-making, even in conflicts with physicians	Average score [†]	Percentage with low score [‡]
	%	%	%	%	%	%	
Total nurses (employees providing direct care)	73.5	75.5	84.9	81.7	72.9	10.4	25.1
Work setting							
Hospital	70.0	72.9	84.2	80.1	70.8	10.1	28.5
Long-term care facility	73.4	75.2	80.7	81.8	72.4	10.3	25.5
Community health setting	82.2	83.9	92.3	85.4	80.2	11.4	15.0
Other[§]	88.3	84.0	88.0	88.4	82.9	11.8	12.8

† Scores can range from 0 to 15, with higher scores indicating more autonomy.

‡ In the bottom quartile of the weighted distribution.

§ Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

■ Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.

Control over practice (Appendix Table 28)

Nurses' feeling of "control over practice" was assessed with seven statements dealing with the time they had to do their jobs, staffing levels and assignments.

More than half (57%) of nurses agreed that "Adequate support services allow me to spend time with my patients" (Table 4.3). Six in 10 (60%) felt that they had enough time and opportunity to discuss patient care.

A substantial majority of nurses held a positive view of their supervisor. Nearly three-quarters felt that their nurse manager or immediate supervisor was a good manager and leader.

Nearly three-quarters (73%) of nurses agreed that they were given the opportunity to work in highly specialized patient care units. Such opportunities, however, were far less likely to have been offered to LPNs (52%) than to RNs (78%) and RPNs (73%).

Just over three-quarters of nurses (77%) agreed with the statement, "I am given assignments that foster continuity of care; that is, I continue to care for



the same patient from one day to the next.” Of course, patient stays in acute care settings have become increasingly short, so continuity of care may be less pertinent to nurses employed in these facilities. RNs were less likely (76%) than LPNs (79%) and RPNs (82%) to agree that they have the opportunity to care for the same patient from one day to the next.

Views on control over practice depended largely on where nurses worked. Relatively low percentages of those in hospitals and long-term care facilities agreed with the statements reflecting control over practice, while percentages were relatively high for nurses in community health and other settings. For instance, less than half of nurses in hospitals and long-term care facilities felt that staffing in their workplace was sufficient to provide quality care and get work done; by contrast, in community health settings, around 60% of nurses believed that staffing was adequate (Table 4.3).

table

Nursing Work Index: Control over practice, by work setting, Canada, 2005

4.3

	Percentage agreeing							Control over practice	
	Support services allow time for patients	Enough time and opportunity to discuss patient care	Enough nurses on staff to provide quality care	Immediate supervisor is a good manager and leader	Enough staff to get work done	Given opportunity to work in specialized care units	Given assignments that foster continuity of care	Average score [†]	Percentage with low score [‡]
	%	%	%	%	%	%	%	%	
Total nurses (employees providing direct care)	56.8	60.4	47.8	73.6	51.7	73.0	76.7	12.0	23.9
Work setting									
Hospital	54.8	58.1	44.2	71.1	49.0	80.6	72.4	11.7	24.9
Long-term care facility	46.6	55.4	43.8	75.0	45.6	44.8	85.3	11.4	29.0
Community health setting	70.5	69.7	58.5	79.4	61.5	50.9	81.6	13.2	17.1
Other[§]	75.6	75.2	70.3	82.8	71.1	58.3	81.8	14.3	13.7

† Scores can range from 0 to 21, with higher scores indicating more control over practice.

‡ In the bottom quartile of the weighted distribution.

§ Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

Data source: 2005 National Survey of the Work and Health of Nurses.

The most notable exception to this pattern was the high percentage of hospital nurses (81%) reporting opportunities to work in specialized units, and the low percentages for nurses employed in other organizations (45% to 58%). As would be expected, a large share of long-term care nurses (85%) felt that their assignments promoted continuity of care.



Based on responses to all seven items related to control over practice, a summary score was compiled for each nurse. Scores in the lowest quartile of the weighted distribution of the summary scores were designated as belonging to the “low control over practice” category.

Relatively high proportions of nurses in long-term care facilities and hospitals were classified as having low control over practice. By contrast, just 17% of nurses in community health settings and 14% of those in other settings were in this category. LPNs were more likely than other types of nurses to have low control over practice: 28% compared with 23% of RNs and 18% of RPNs.

Low control over practice affected a much larger percentage of nurses in Quebec than elsewhere. The proportion was also relatively high in Newfoundland and Labrador. By contrast, relatively few nurses in Prince Edward Island and the territories were classified as having low control over practice.

Nurse-Physician working relations (Appendix Table 29)

Nurses’ perceptions of their working relations with physicians were overwhelmingly positive: 87% reported good relations; 81%, a lot of teamwork between nurses and physicians; and 89%, collaboration with physicians.

Taking into account the responses to the three items pertaining to nurse-physician working relations, a summary score was calculated. Nurses with scores in the lowest quartile of the weighted distribution were categorized as having a low (relatively unfavourable) score on nurse-physician relations.

LPNs were more likely, and RNs less likely, to have poor working relations with physicians, as indicated by a low summary score. As well, nurses aged 55 or older were considerably less likely than younger nurses to have a low nurse-physician working relations score: 17% versus about 23% of younger nurses.

Quebec nurses were considerably more likely to score low on perceptions of their working relations with physicians than nurses in the rest of Canada. An estimated 26% of Quebec nurses had scores placing them in the unfavourable range. This contrasted sharply with about 18% in Alberta and British Columbia and 10% in the territories.

Lack of respect (Appendix Table 30)

The level of respect that nurses felt they received depended on where it came from. Nearly 1 nurse in 5 felt they did not receive the respect they deserved from their superiors, but only 5% reported feeling a lack of respect from colleagues (Chart 4.3). More generally, 1 in 6 reported that, in light of their efforts and achievements, they deserved more respect and prestige than they received.

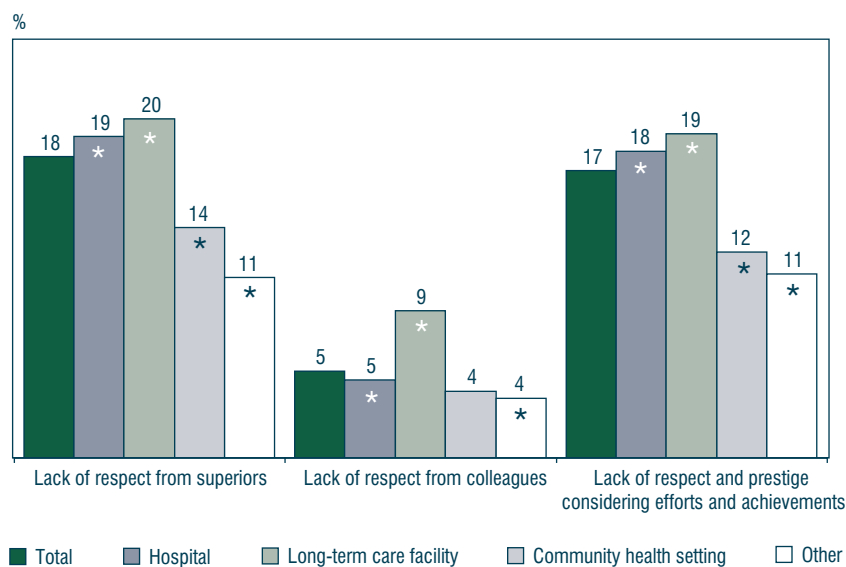


Compared with other types of nurses, LPNs were consistently more likely to perceive a lack of respect, and RNs less likely. Nurses employed in long-term care facilities were particularly likely to perceive a lack of respect. As well, relatively large percentages of hospital nurses reported a lack of respect from superiors and insufficient recognition for their efforts and achievements. However, relatively few hospital nurses reported a lack of respect from colleagues.

chart

4.3

Percentage of nurses reporting lack of respect, by work setting, Canada, 2005



Note: Based on nurses who are employees and provide direct care.
* Significantly different from estimate for the other work setting categories, combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.

Job dissatisfaction (Appendix Table 31)

Job dissatisfaction was more prevalent among nurses than among employed individuals overall. About 12% of both female and male nurses indicated that they were “somewhat” or “very dissatisfied” in response to the question, “On the whole, how satisfied are you with this job?” This compares with around 8% for all employed women and men (Chart 4.4). And beyond dissatisfaction with a specific job, about 1 nurse in 10 was dissatisfied with nursing as a profession. However, only 4% indicated that they actually planned to leave nursing in the next year; of these nurses, the majority cited retirement as the reason for leaving (data not shown).



The youngest nurses were less likely than those who were older to be dissatisfied. Around 10% of those younger than 35 were dissatisfied with their job, and 7% were dissatisfied with being a nurse. From age 35 on, job dissatisfaction affected around 12%, and the proportion dissatisfied with being a nurse was about 10%.

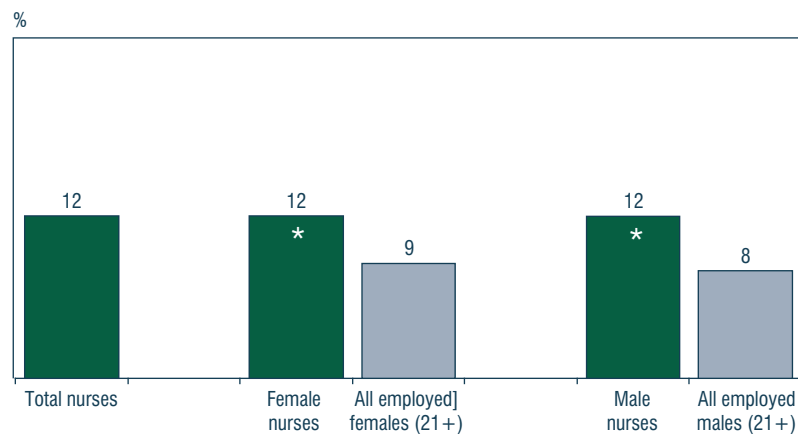
Although LPNs were more likely than other types of nurses to express job dissatisfaction, RNs were slightly more likely than the other groups to be dissatisfied with being a nurse. Job dissatisfaction was nearly twice as high among nurses in hospitals and long-term care facilities as among those working in community health and other settings. By contrast, dissatisfaction with being a nurse did not vary significantly by work setting.

At 13%, Quebec nurses were more likely than those employed elsewhere in Canada to be dissatisfied with their job. As for being dissatisfied with being a nurse, the proportions of nurses reporting this were lower in the four Atlantic provinces, as well as in Alberta.

chart

Percentage of nurses and all employed people reporting job dissatisfaction, by sex, Canada, 2005

4.4



* Significantly different from estimate for All employed females/males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2002 Canadian Community Health Survey, cycle 1.2.



Physical and mental health

Chapter 5

In addition to examining the employment situation of nurses, a goal of the 2005 National Survey of the Work and Health of Nurses (NSWHN) was to assess their physical and mental well-being. Nurses answered questions about a variety of physician-diagnosed chronic conditions, pain and its impact, depression, health problems that interfered with job performance, and time taken off work for health-related reasons.

Chronic conditions (Appendix Tables 32 to 36)

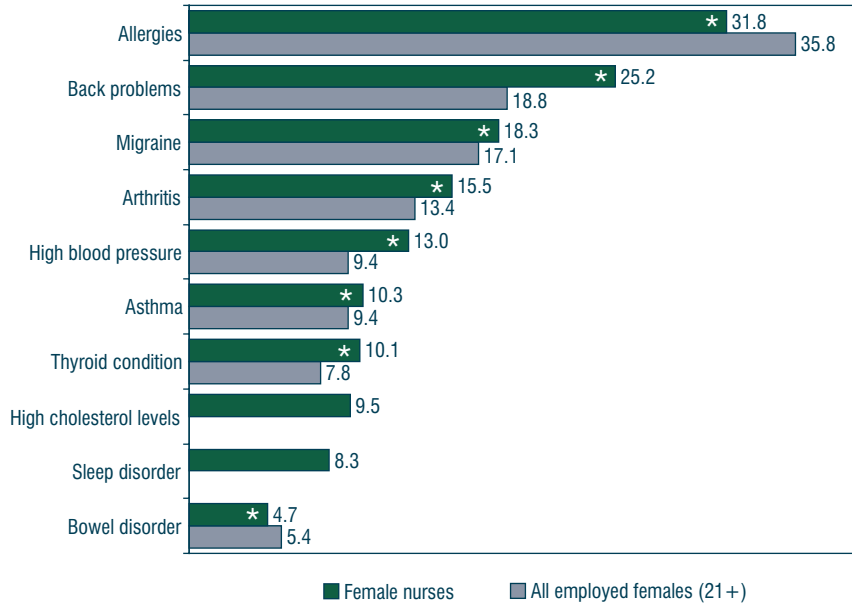
Nurses were asked if they had been diagnosed with specific chronic conditions: back problems, arthritis, allergies, asthma, migraine, sleep disorders, high blood pressure, high cholesterol, diabetes, heart disease, thyroid disorder, bowel disorder, stomach or intestinal ulcers, cancer, and medically unexplained physical symptoms (fibromyalgia, chronic fatigue syndrome and multiple chemical sensitivities). The prevalence of most of these conditions was high among nurses, relative to all employed people.



chart

5.1

Percentage of female nurses and all employed females reporting selected chronic conditions, Canada, 2005



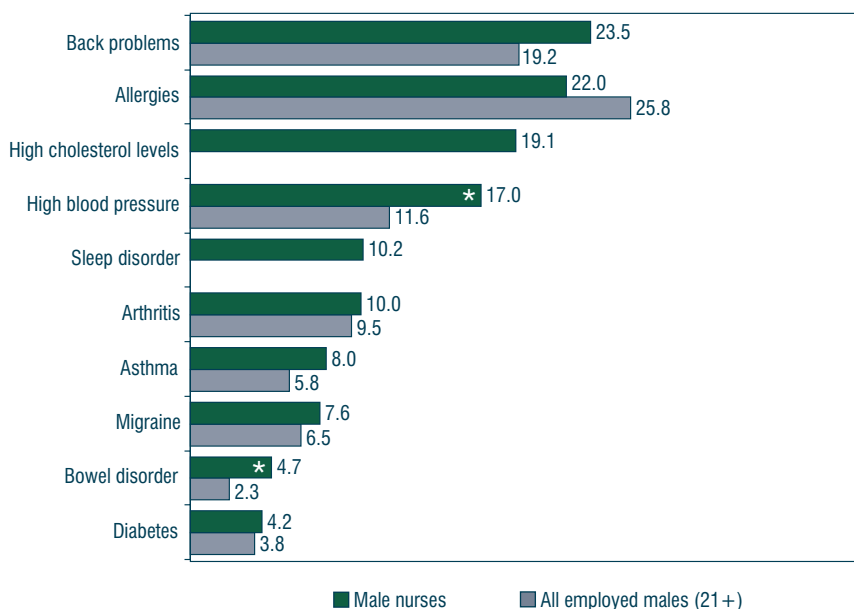
Note: Data for high cholesterol levels and sleep disorder not available for all employed females.
* Significantly different from estimate for All employed females ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

chart

5.2

Percentage of male nurses and all employed males reporting selected chronic conditions, Canada, 2005



Note: Data for high cholesterol levels and sleep disorder not available for all employed males.
* Significantly different from estimate for All employed males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.



Back problems and arthritis were more prevalent among female nurses than among employed women overall, but no significant differences emerged for men (Charts 5.1 and 5.2). A quarter (25%) of female nurses had back problems, compared with 19% of employed females in general. Back problems affected a relatively large percentage of hospital nurses, compared with other work settings.

Migraine was fairly common among nurses, affecting 18% of them. Although the estimate for nurses exceeded the figure for employed women overall, the difference was unremarkable. Proportions were much lower among men. Sleep disorders were reported by statistically similar proportions of female and male nurses: 8% and 10%.

Nearly one-sixth (16%) of Canadian nurses had at least one of the following selected diseases or risk factors related to cardiovascular disease: high blood pressure, diabetes or heart disease.

High blood pressure was significantly higher among nurses, compared with all employed men and women. The higher prevalence in nurses may be partly attributable to greater awareness of their own blood pressure level—leading to a higher likelihood of diagnosis of abnormal values and more reliable recall of the condition.

Prevalence estimates for both diabetes and heart disease were slightly, but significantly, higher in female nurses, compared with all employed women.

Although many of the chronic conditions presented in Charts 5.1 and 5.2 are related to age, the higher estimates for nurses versus the overall employed population are not generally due to the older average age of nurses. Age accounted for the excess in only one case; when controlling for age, female nurses were no more likely than employed women in general to have arthritis (odds ratios not shown). All other differences persisted (data not shown).

Average number of chronic conditions

(Appendix Table 37)

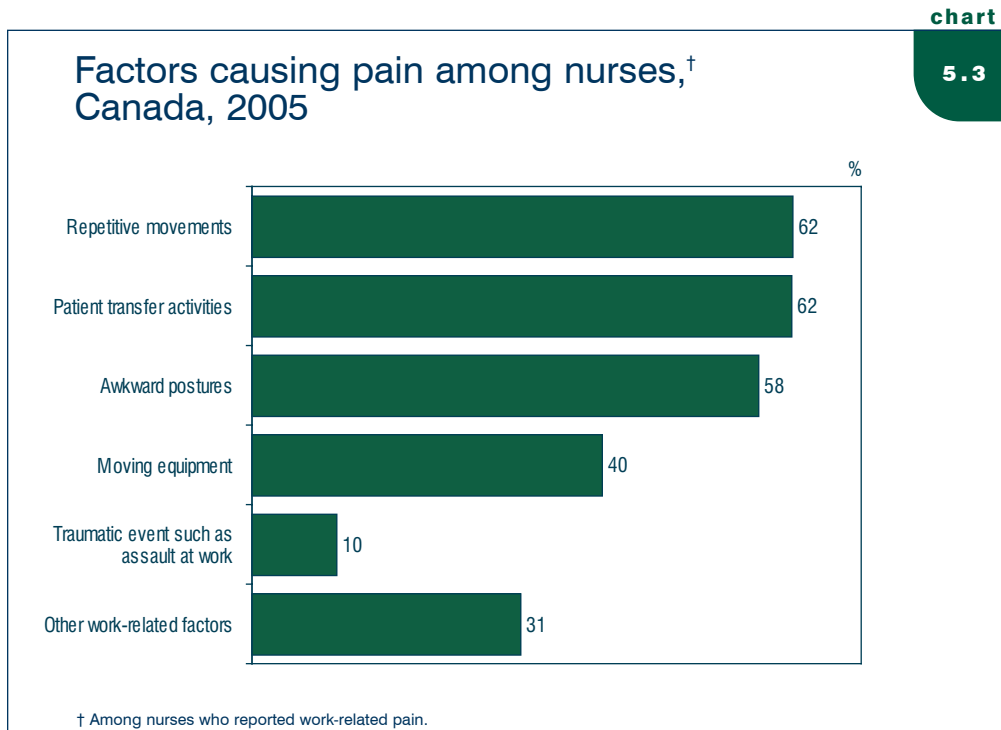
The average number of chronic conditions reported was 1.5 for female nurses, significantly above the average of 1.1 for male nurses. Both figures exceeded the averages for all employed women (1.3) and men (0.9).

Pain (Appendix Table 38)

In the previous 12 months, over 1 in 3 nurses had experienced pain or discomfort, aching or tingling that had been serious enough to prevent them from carrying out their normal activities. A significantly higher proportion of female than male nurses reported pain: 37% versus 32%. More than 1 nurse in 10 reported “severe” or “unbearable” pain. The back/buttocks were most commonly affected. Nearly one-quarter of all nurses reported that pain had affected their ability to carry out their nursing duties.



Three-quarters of the nurses who had had activity-limiting pain in the previous year said that it had resulted from work-related factors (data not shown). Among those reporting work-related pain, the factors most commonly cited as causing it were “repetitive movements while working,” “patient transfer activities—for example, lifting or turning,” and “awkward postures while working” (Chart 5.3).



Data source: 2005 National Survey of the Work and Health of Nurses.

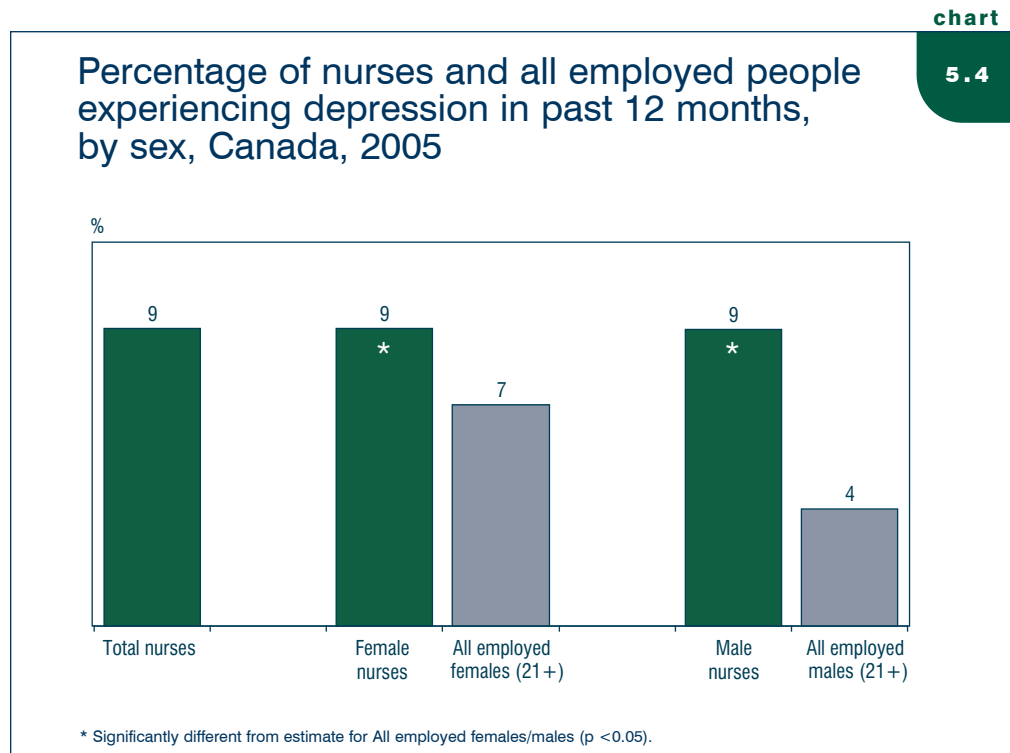
Activity-limiting pain was almost equally common among RNs, LPNs and RPNs. However, greater proportions of LPNs and RPNs had suffered pain that they described as severe or unbearable. Similarly, LPNs and RPNs were more likely than RNs to have experienced pain that affected their ability to function as a nurse.

The percentage of hospital nurses who experienced activity-limiting pain was higher than the percentages for nurses employed in other venues. And about one-quarter of hospital and long-term care nurses had experienced pain that limited their ability to carry out their jobs, significantly higher than the proportions for nurses in community health (20%), and other settings (18%).

Quebec nurses were less likely than those working in other parts of Canada to have experienced activity-limiting pain or to report that pain had interfered with their job performance. On the other hand, high proportions of nurses in Newfoundland and Labrador had experienced severe pain and reported that pain had hampered their ability to do their job.

Depression (Appendix Table 39)

The proportion of nurses who had experienced depression in the previous year was higher than in the employed population overall. In contrast to the higher incidence of depression in females than males in the employed population, female and male nurses were equally likely to have had depression. Close to 1 in 10 nurses (9% of both women and men) had experienced depression, compared with 7% of all employed women and 4% of all employed men (Chart 5.4).



Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Nurses aged 35 to 44 were more likely, and those aged 55 or older less likely, to have experienced depression in the past year. There were, however, no significant differences by type of nurse or by work setting.

Depression had affected a higher percentage of Quebec nurses (11%), while the percentages were low in Newfoundland and Labrador and in Prince Edward Island (5% and 6%, respectively).



General health and mental health

(Appendix Table 40)

Self-perceived health is a reliable and valid indicator of health status. (See Idler EL, Kasl S, “Health perceptions and survival: Do global evaluations of health status really predict mortality?” in Vol. 46, No. 2 of *Journal of Gerontology: Social Sciences* 1991, S55-65.)

When asked to rate their general health on a five-point scale—excellent, very good, good, fair, or poor—the vast majority of employed individuals (93%), including nurses, described it as at least “good.” In fact, despite a higher prevalence of many chronic conditions, nurses were no more or less likely than employed people overall to report fair or poor general health. But when asked about their mental health, nurses’ assessments were slightly less favourable than those of employed individuals overall. Fair or poor mental health was reported by 6% of female and male nurses, compared with 4% of all employed women and 3% of all employed men.

As might be expected, the proportion of nurses reporting fair or poor general health rose with age, from 3% of those younger than 35 to nearly 8% at age 45 and beyond. On the other hand, reports of fair or poor mental health were more common among nurses aged 35 to 44 (7%), and less common among those aged 55 or older (4%).

Higher percentages of LPNs and RPNs—8% and 9%, respectively—reported fair or poor general health. This compared with 6% of RNs. As well, nurses employed in long-term care facilities had a higher likelihood (8%) of reporting fair or poor general health, compared with those in hospitals, community health, or other settings. Nurses working in long-term care facilities were also more likely than nurses elsewhere to report fair/poor mental health.

Nurses in Prince Edward Island and Quebec were less likely than those employed elsewhere to report fair or poor general health. The proportions reporting fair or poor mental health were relatively low in Newfoundland (3%), Nova Scotia (3%) and Prince Edward Island (4%), and were higher in Ontario (7%).

Medication use (Appendix Tables 41, 42 and 43)

Nurses were asked about their use of several types of medications: tranquilizers; antidepressants; codeine, Demerol or morphine; sleeping pills; pain relievers such as aspirin or Tylenol; medicine for high blood pressure; diuretics or water pills; and stomach remedies. To calculate the average number of medications taken in the past month, all of these types were considered.



On average, each nurse had taken 1.5 different medications; this average was the same for female and male nurses. However, the average number of medications taken by nurses was statistically higher than the averages for employed women and men overall: 1.3 and 1.0, respectively.

Similar proportions of female and male nurses (17% and 16%, respectively) had used three or more medications in the past month. Proportions were lower in the total employed population, where the difference between women (11%) and men (6%) was larger.

Just 4% of nurses reported tranquilizer use in the past month; the percentage did not differ significantly between male and female nurses. Male nurses, however, were much more likely than employed men overall to have taken tranquilizers (6% versus 1%); the difference between female nurses and female employees overall was not statistically significant (4% versus 3%).

Antidepressants had been used by 9% of nurses. Despite the nearly equal prevalence of depression reported by male and female nurses, a significantly larger share of female than male nurses (9% versus 6%) had taken these medications. As well, nurses' use of antidepressants was higher than that of employed people in general: 7% of women and 3% of men. This is not surprising, given that nurses were more likely to report depression. Of nurses who had experienced an episode of depression in the past year, 40% reported antidepressant use within the past month (data not shown).

Eight percent of nurses had used sleeping pills in the past month. Perhaps partly reflecting their efforts to cope with sleep disturbances resulting from irregular shift work, the proportions of female and male nurses who had taken these medications (both 8%) exceeded the corresponding proportions of all female and male employees (4% and 2%). Even when the analysis was restricted to nurses and members of the general employed population who were shift workers, nurses' use of sleeping pills was higher (10% versus 3%) than in employed people in general (data not shown).

The vast majority (82%) of nurses had taken aspirin- or acetaminophen-based pain relievers or anti-inflammatories within the month before the survey. Use of these medications was higher among female than male nurses, and was also higher among nurses in comparison with the employed population.

Over one-fifth (22%) of nurses had taken stomach remedies—men and women in equal proportions. Nurses were much more likely than employed people in general to use these medicines; among women, 22% of nurses took them, compared with 14% of female employees overall; in men, the respective proportions were 22% and 12%.



Difficulty handling workload because of physical health (Appendix Table 44)

About 1 nurse in 3 stated that at least some of the time in the previous month, their physical health had made it difficult to handle their workload. The proportions reporting such problems did not differ significantly by sex.

Probably as a reflection of the greater physical demands of their jobs, hospital and long-term care nurses were more likely than those working in other environments to report that their physical health had made their workload difficult to handle. About a third of nurses in long-term care facilities or hospitals reported workload difficulties because of physical health, compared with 27% in community health settings and 23% in other settings.

LPNs were more likely than other types of nurses to report that their physical health had hampered their ability to work.

Younger nurses were more likely than older nurses to report that physical health problems had made their workload difficult to handle. While 34% of nurses younger than 35 reported such difficulties, the figure was 27% for those aged 55 or older.

Difficulty handling workload because of mental health (Appendix Table 44)

Close to one-fifth of nurses reported that their mental health had made their workload difficult to handle during the previous month, with no statistically significant difference between women and men. Compared with other nurses, hospital nurses and RPNs were more likely to report problems managing their workload due to mental health issues. Such difficulties were much less common among nurses aged 55 or older (13%) than among younger nurses (about 20%).

In contrast to their higher likelihood of having difficulty with workload because of their physical health, nurses in Newfoundland and Labrador were less likely than nurses in other parts of the country to attribute workload problems to their mental health. The proportions were relatively high in Manitoba, Saskatchewan and British Columbia.

Health-related absences (Appendix Table 45)

In the year before they were surveyed, 61% of nurses had taken time off work for health reasons. More than half reported being absent because of a physical illness, and just over 1 in 10 had taken time off for their mental health. Absence from work due to an injury affected 12% of nurses, and about 5% had taken disability leave. Health-related work absences did not differ between male and female nurses.

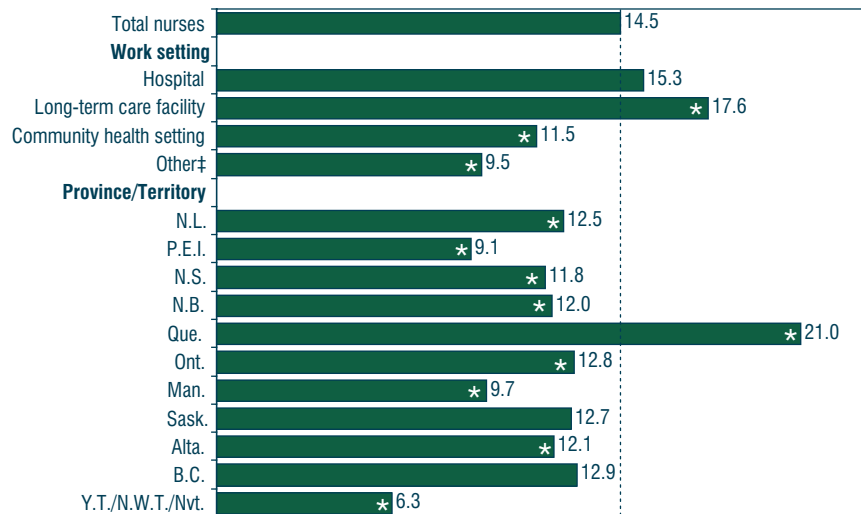
Nurses who were absent missed an average of 23.9 days. Including those who had not been absent, the average was 14.5 days per nurse (Chart 5.5). An estimated 14% of all nurses had been absent for 20 or more days during the previous year due to health problems.

The amount of time nurses missed differed by their employment status. For example, those with permanent jobs averaged 15 days absent due to health problems, while the average for nurses with temporary jobs was 9 days (data not shown). Self-employed nurses averaged only 7 days away for health-related reasons (data not shown).

chart

5.5

Average number of work days nurses missed at their main job[†] for health-related reasons in the past 12 months, by work setting and province/territory, Canada, 2005



Note: Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

[†] The nursing job with the most weekly hours (see Definitions).

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

* Significantly different from the estimate for the other categories in the group, combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.



The relationship between the nature of the nurse's job and the amount of time absent for health-related reasons is unclear. Nurses who provided direct care averaged 15 days absent, as did nurse managers (data not shown).

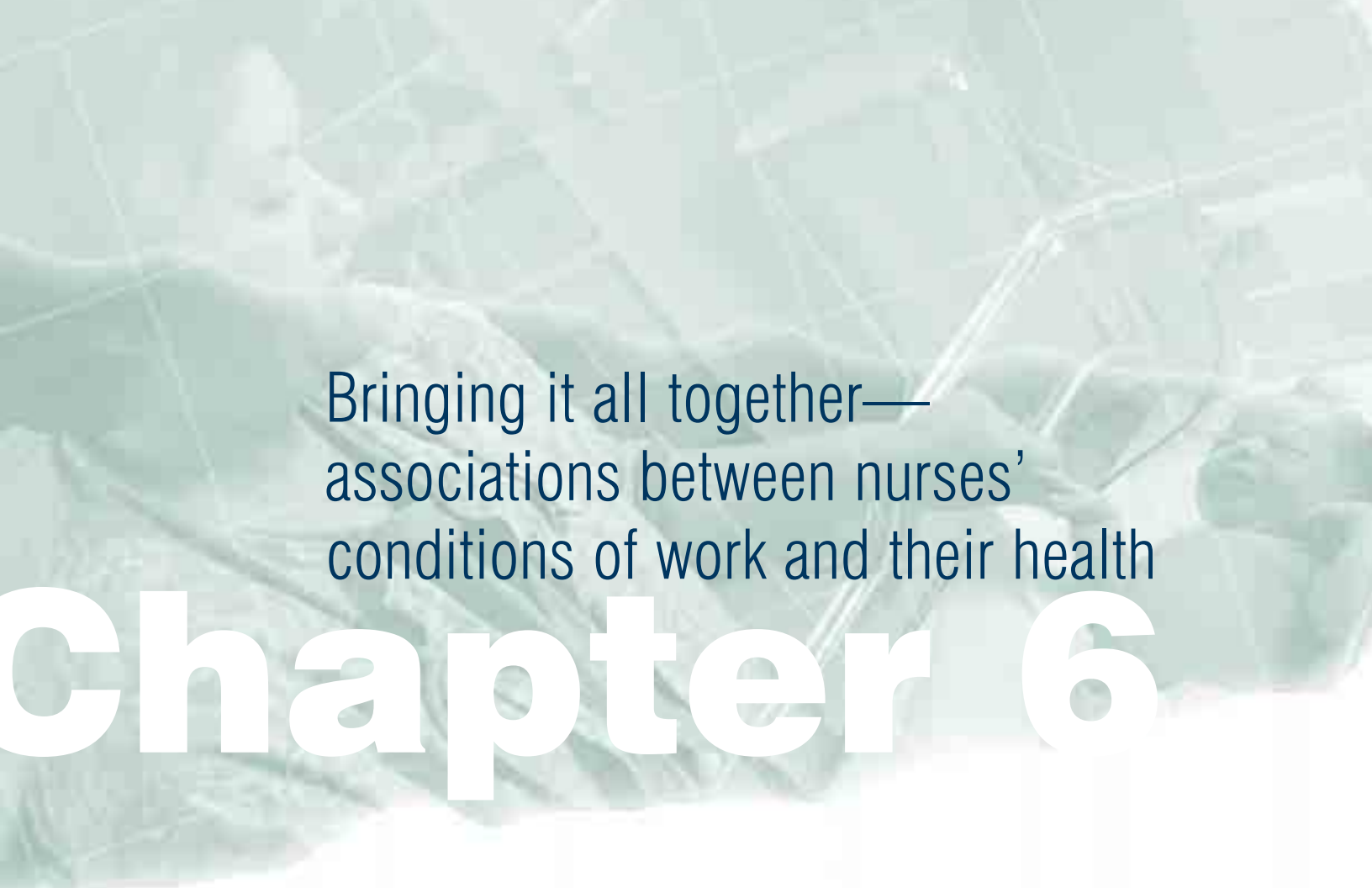
Hospital nurses were more likely than those in other workplace settings to be absent for health-related reasons. However, nurses employed in long-term care facilities who were absent tended to take more days off than did nurses in other work settings. Averaged over the total number of nurses in each type of facility, days absent per nurse were 17.6 in long-term care facilities, 15.3 in hospitals, 11.5 in community health settings, and 9.5 in other settings. As well, nurses in long-term care facilities and hospitals were more likely to have been absent for 20 or more days—16% and 14%, respectively—compared with nurses in community health settings (12%), and other settings (9%).

RPNs were more likely than RNs or LPNs to have been absent from work because of a health problem, but LPNs missed more days. Including those who had not been absent, time off for health-related reasons averaged 17.1 days per LPN, 13.8 days per RN, and 14.4 days per RPN. Nearly one-sixth (16%) of LPNs missed 20 or more days, compared with 13% of RNs and RPNs.

Nurses younger than 45 were more likely than older nurses to have taken time off because of their health. However, nurses aged 55 or older who had health-related absences averaged more days off than did younger nurses.

The proportions of nurses who had taken health-related time off during the previous year were lower in Quebec (48%) and the territories (49%) than in other parts of the country. But in Quebec, the average number of days absent for nurses who had taken time off was 44 days, well over twice as long as anywhere else (13 to 20.6 days). Averaged over all nurses, regardless of whether they had been absent, time off due to health problems was 21 days per nurse in Quebec, compared with 6.3 to 12.9 days elsewhere. Quebec nurses were also more likely to have been absent for 20 or more days during the year: 19% of nurses in that province had absences totalling at least 20 days, compared with 7% of nurses in the territories and 8% in Manitoba.

For nurses in Quebec, the higher number of average days absent for health-related reasons is mostly attributable to non-injury-related long-term absences (10 or more days), as well as injury-related absences of any duration. For long-term non-injury absences, Quebec nurses averaged 12.7 days—more than twice the 5.8-day average for their counterparts elsewhere in Canada. Similarly, nurses in Quebec averaged 5.7 days absent because of injury, compared with 2.8 days elsewhere. But for non-injury-related absences of shorter periods (less than 10 days), Quebec nurses averaged 1.8 days versus 2.9 days for other nurses (data not shown).



Bringing it all together—
associations between nurses'
conditions of work and their health

Chapter 6

As the preceding chapters have shown, nurses face physical and emotional challenges in doing their jobs. As well, a number of physical and mental health problems were more prevalent in nurses than they were in employed people overall, even though nurses were no more likely to be obese, were less likely to smoke, and lived in households with higher incomes. Clearly, factors other than these are affecting nurses' health. The purpose of the analysis reported in this chapter is to determine if the physical and mental health of nurses is associated with their conditions of work, specifically, tangible factors such as scheduling, shifts and overtime, and less tangible factors such as co-worker support and the sense of having autonomy and receiving respect.



Role of tangible aspects, psychosocial factors? (Appendix Tables 46 to 51)

To examine relationships between nurses' work conditions and their health, work-related factors were first examined individually in relation to three indicators of health: self-reported general health, self-reported mental health, and absences from work for health-related reasons totalling at least 20 days in the past year.

Work-related factors were organized into five groups. The first group pertained to tangible aspects of the job; its elements included usual shift worked, number of shift changes in past two weeks, having multiple jobs, hours worked per week, work setting and union coverage.

The other four groups of work-related factors reflect a variety of interpersonal, social and psychological aspects of nurses' work, that are collectively referred to in this report as "psychosocial": work stress (job strain, supervisor support, co-worker support, job insecurity, physical demands); Nursing Work Index (autonomy, control over practice, nurse-physician working relations); respect (from superiors, from co-workers); and role overload.

Multivariate analysis (see Analytical techniques) was used to examine associations between work-related factors and health, while taking into account the potentially confounding effects of sex, age, type of nurse, province/territory, household income, smoking and obesity (control variables). Separate regression models were fitted for each of the three health indicators (dependent variables).

The multivariate analysis was designed to address the following questions:

- Are the tangible factors of work organization related to nurses' health?
- Do psychosocial factors of the job have an independent association with health, once the tangible factors are taken into account?

The independent variables were entered into the models in five stages. Tangible work organization factors were entered in the first model, along with the control variables. Then each of the four groups of psychosocial factors (work stress factors, Nursing Work Index, respect, and role overload) was entered separately into four subsequent models, in which all of the tangible factors and control variables were retained. Thus, five models were produced for each of the three dependent variables (general health, mental health, and high work absence for health-related reasons).



Work organization and general health

(Appendix Table 46)

Compared with nurses who usually worked the day shift, those who worked evenings were more likely to report that their general health was “fair” or “poor” (as opposed to “good,” “very good,” or “excellent”). An estimated 9% of nurses who usually worked evenings reported fair or poor health, compared with 6% of those who worked days (Appendix Table 46). In multivariate analysis that controlled for potential confounders and in which all variables reflecting work organization were considered simultaneously, the association between working the evening shift and unfavourable general health persisted.

Bivariate analysis indicated that poor or fair general health was also more likely in nurses employed in long-term care facilities, compared with those employed in hospitals; that association likewise remained significant in multivariate analysis.

No other associations emerged between poor or fair general health and the other tangible aspects of work organization that were considered (number of shift changes in past two weeks, multiple jobs, usually works more than 40 hours per week or union coverage).

Psychosocial factors and general health

(Appendix Table 47)

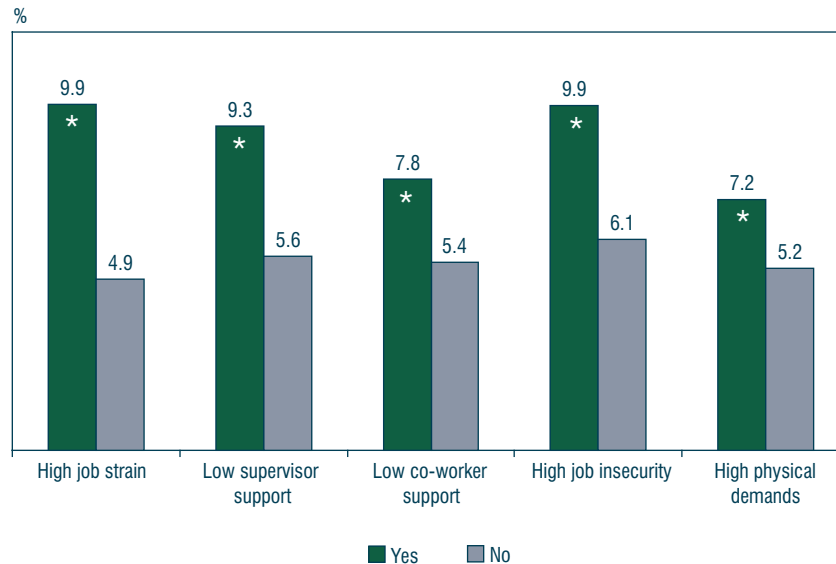
In contrast to the findings for tangible aspects of work organization, associations between fair or poor general health and work stress were fairly consistent and significant (Appendix Table 47). Bivariate analysis indicated that fair or poor health was more likely among nurses reporting each work stress indicator: high job strain, low supervisor support, low co-worker support, high job insecurity, and high physical demands (Chart 6.1). For high job strain, the association was particularly pronounced: the proportion of nurses in fair or poor health was nearly twice as high for those with high job strain (10%) as it was for those without high job strain (5%).



chart

6.1

Percentage of nurses reporting fair or poor general health, by work stress, Canada, 2005

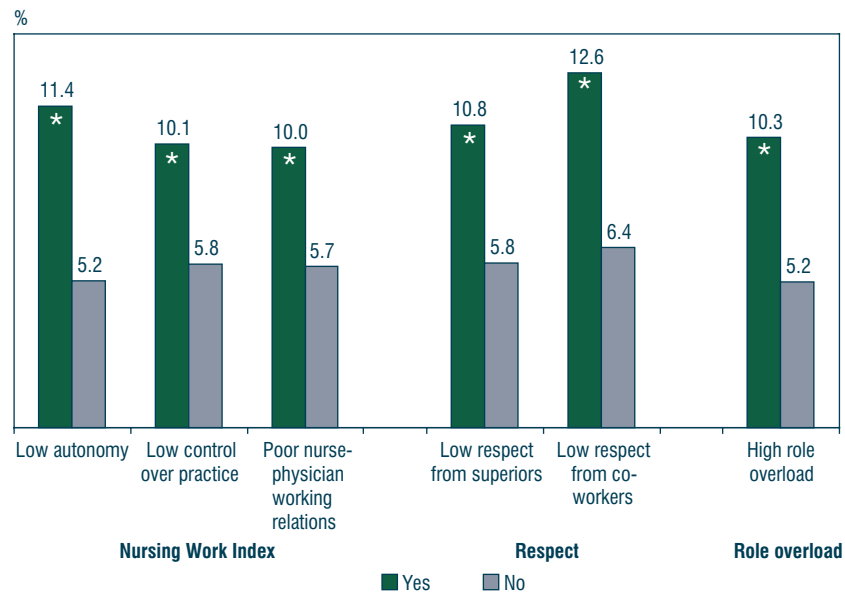


Data source: 2005 National Survey of the Work and Health of Nurses.

In multivariate analysis, controlling for sex, age, type of nurse, province/territory, household income, smoking, obesity and tangible factors related to work organization, all work stress factors remained significantly associated with fair or poor health. The odds of fair or poor health for nurses with high job strain were 80% larger than the corresponding odds for those without high job strain (odds ratio of 1.8; 95% confidence interval 1.4-2.2). Similarly, the odds of poor or fair health were significantly elevated for nurses with low supervisor support, low co-worker support, high job insecurity, or high physical demands.

Significant associations also emerged between fair or poor health and the factors included in the Nursing Work Index. The proportions of nurses in fair or poor health were about twice as high for those categorized as having low autonomy, low control over practice or negative perceptions of nurse-physician working relations, compared with nurses not in these categories (Chart 6.2). And in the multivariate analysis, as indicated by the consistently elevated odds ratios, the associations with low autonomy and poor nurse-physician working relations persisted.

Percentage of nurses reporting fair or poor general health, by Nursing Work Index, respect and role overload, Canada, 2005



Data source: 2005 National Survey of the Work and Health of Nurses.

The likelihood of fair or poor health was nearly twice as high for nurses who reported receiving low respect from their superiors or co-workers, compared with those who reported receiving more respect. An estimated 11% of nurses who received low respect from their superiors were in fair or poor health, compared with 6% who received more respect; 13% who received low respect from co-workers were in fair or poor health, compared with 6% who received more respect from co-workers (Chart 6.2). However, in multivariate analysis, the association with low respect from the superiors persisted (odds ratio 1.7; 95% confidence interval 1.3-2.1), but the association with low respect from co-workers was no longer significant.

Finally, high role overload was also significantly and negatively related to level of health. One-tenth (10%) of nurses with high role overload were in fair or poor health, compared with 5% of those without high role overload. This relationship persisted and was highly significant in multivariate analysis; the odds of fair or poor health for nurses with high role overload were over twice those for nurses without high role overload.



Work organization and mental health (Appendix Table 48)

Similar to the findings for general health, nurses who usually worked evening shifts were more likely to report fair or poor mental health, compared with nurses who usually worked days. Of evening shift workers, 8% were in fair or poor mental health, compared with 5% of day shift workers (Appendix Table 48). And in multivariate analysis, controlling for potential confounders and other tangible aspects of work organization, the relationship between evening shift and fair or poor mental health persisted. The odds of fair or poor mental health were 50% larger for nurses who usually worked evenings than they were for nurses who usually worked days. Of course, with cross-sectional data, it is not possible to determine the sequence of events underlying associations between the variables. However, an analysis of Canadians who were followed over several years indicates that shift work is predictive of poor mental health outcomes. (See Shields M, "Shift work and health," in Vol. 13, No. 4 of Health Reports, Statistics Canada Catalogue no. 82-003; 2002.)

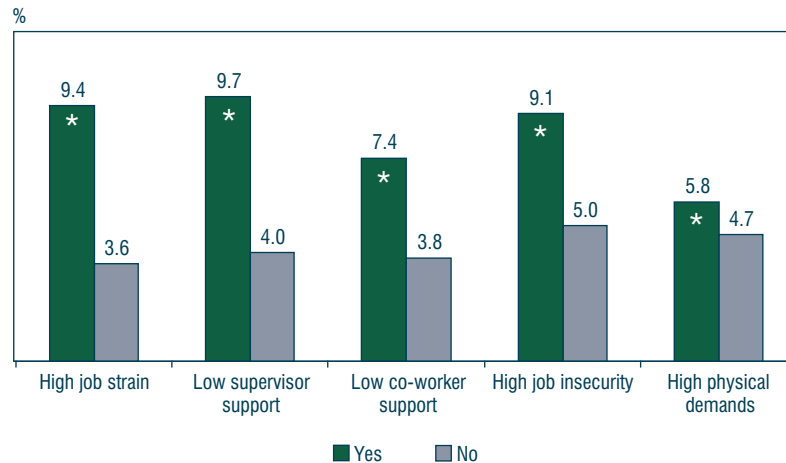
Bivariate analysis indicated that the likelihood of fair or poor mental health was lower for nurses employed in settings other than hospitals, long-term care or community health settings, compared with the likelihood for nurses employed in hospitals. Multivariate analysis did not support this relationship; however, a significant association between fair or poor mental health and employment in a long-term care facility did emerge.

Psychosocial factors and mental health

(Appendix Table 49)

The proportions of nurses in fair or poor mental health were consistently higher if they reported exposure to elements of work stress—high job strain, low supervisor support, low co-worker support, high job insecurity or high physical demands (Chart 6.3). The difference was pronounced for job strain—9% of nurses with high job strain reported fair or poor mental health, compared with 4% of those without high job strain (Appendix Table 49). In multivariate analysis, three of the work stress factors—high job strain, low supervisor support and low co-worker support—remained significantly related to fair or poor mental health. The odds of fair or poor mental health for nurses with high job strain or low supervisor support were about twice those for nurses without these stressors; nurses with low co-worker support had odds of fair or poor mental health that were about 40% higher than those for nurses without this stressor.

Percentage of nurses reporting fair or poor mental health, by work stress, Canada, 2005



* Significantly different from estimate for "No" ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.

Fair or poor mental health was also strongly related to low autonomy, low control over practice and poor nurse-physician working relations. Nurses reporting these difficulties were twice as likely to be in fair or poor mental health as those who did not report such problems (Chart 6.4). Even when controlling for potential confounders and tangible work organization factors, the odds of fair or poor mental health were significantly elevated for nurses with low autonomy, low control over practice or poor nurse-physician working relations.

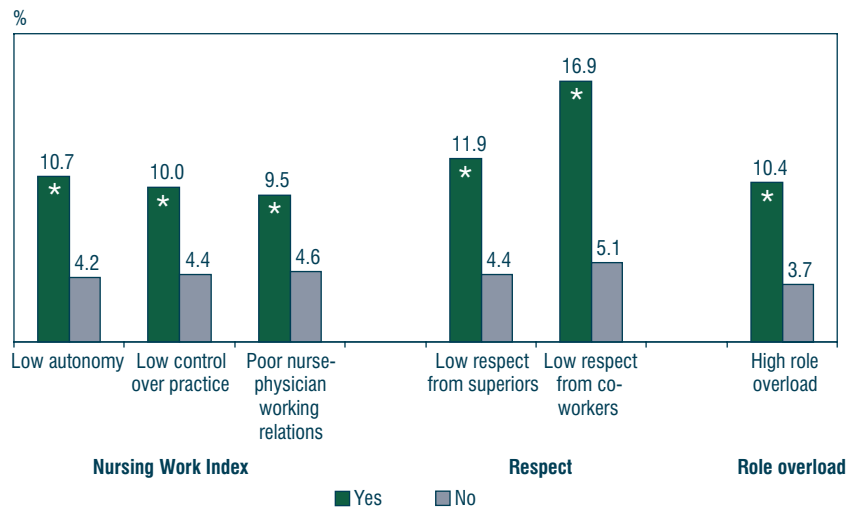
Low respect from superiors as well as low respect from co-workers were each strongly and negatively related to mental health. Of nurses who received low respect from their superiors, 12% were in fair or poor mental health, compared with 4% of those who received more respect (Chart 6.4). The difference in relation to respect from co-workers was even more pronounced: 17% of those with low respect were in fair or poor mental health, compared with 5% of those with more respect. These relationships persisted in multivariate analysis; the odds of fair or poor mental health were over twice as high for nurses with low respect from either source, compared with nurses receiving more respect.



chart

6.4

Percentage of nurses reporting fair or poor mental health, by Nursing Work Index, respect and role overload, Canada, 2005



* Significantly different from estimate for "No" (p <0.05).

Data source: 2005 National Survey of the Work and Health of Nurses.

Nurses with high role overload were also significantly more likely to be in fair or poor mental health than were those without high role overload. One in 10 nurses with high role overload reported fair or poor mental health, compared with 4% of those without high role overload. This relationship persisted even when potential confounders were taken into account; the odds of fair or poor mental health for nurses with high role overload were nearly three times (2.8; 95% confidence interval 2.3-3.6) those for nurses without high role overload.

Work organization and health-related work absence

(Appendix Table 50)

The third health indicator considered in relation to tangible and psychosocial aspects of work was absences from work for health-related reasons totalling 20 or more days in the past year. Similar to the findings related to general and mental health, nurses who usually worked evenings were more likely than those who worked days to have been away 20 or more days. Working mixed shifts was also related to absence from work. Nearly 18% of nurses who usually worked evenings and 15% who usually worked mixed shifts had been absent for at least 20 days in the past year for health-related reasons, compared with 12% whose usual shift was days (Appendix Table 50). In multivariate analysis, neither of these associations persisted.



Nurses with more than one job were less likely than those with only one job to have been absent from their main job for 20 or more days. About 1 in 10 nurses who were multiple job holders had missed this much work, a significantly smaller proportion than that for those with only one job (14%). This pattern persisted in multivariate analysis; nurses with more than one job had only 60% the odds of missing 20 or more days, compared with nurses with one job. Note that nurses reported on absences from their main job only, so the actual number of days absent for nurses with multiple jobs may have been higher, which could partially account for the negative relationship observed between multiple job holders and high absence from work.

Unionized nurses were more likely to have been absent from their main job for 20 or more days, compared with those who were non-unionized. Of unionized nurses, 15% reported health-related absences of at least 20 days, compared with 8% of those who were non-unionized. This relationship persisted in multivariate analysis; the odds of having been absent for at least 20 days were 70% higher for unionized nurses, compared with those for their non-unionized counterparts.

Work setting was also associated with the likelihood of absence from work. Nurses employed in community health settings or in “other” settings were less likely than nurses employed in hospitals to have missed 20 or more days of work due to health-related reasons. In multivariate analysis, though, this relationship was observed only for nurses working in ‘other’ settings.

Psychosocial factors and health-related work absence (Appendix Table 51)

Work absences for health-related reasons were also related to aspects of work stress. Nurses with high job strain were significantly more likely than those with lower levels of job strain to have been absent for at least 20 days: 17% versus 12% (Appendix Table 51; Chart 6.5). A similar pattern emerged in relation to low supervisor support, low co-worker support and high physical demands. When all work stress factors, along with tangible factors and other potential confounders, were considered simultaneously in multivariate analysis, the associations with high job strain, low supervisor support and high physical demands persisted.

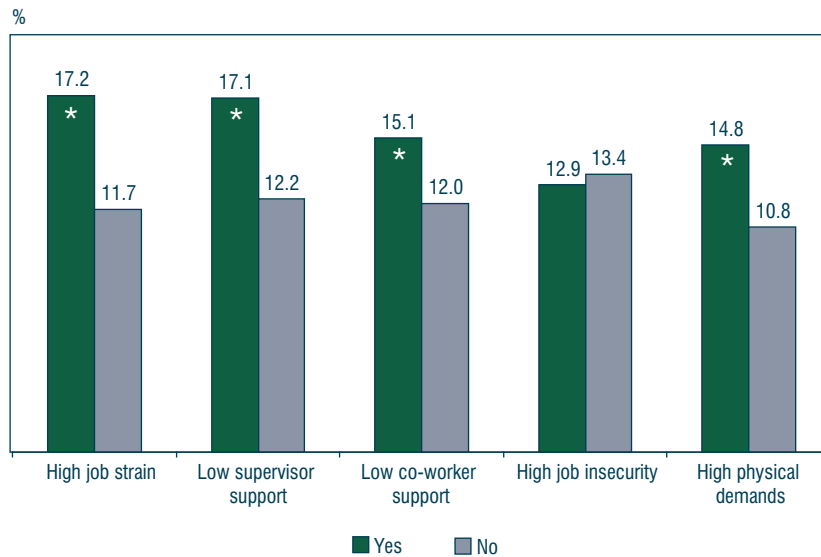
Nurses categorized as having low autonomy, low control over their practice or poor working relations with physicians were more likely to have missed at least 20 days' work. Of those with low autonomy, 18% had been absent for this amount of time, compared with 13% of those with more autonomy (Chart 6.6). The corresponding proportions for low control over practice were 19% and 13%, and for poor nurse-physician working relations, 16% and 14%. Of these three Nursing Work Index factors, only low control over practice remained significantly associated with work absence in multivariate analysis.



chart

6.5

Percentage of nurses absent 20 or more days from their main job[†] in past year due to health problems, by work stress, Canada, 2005



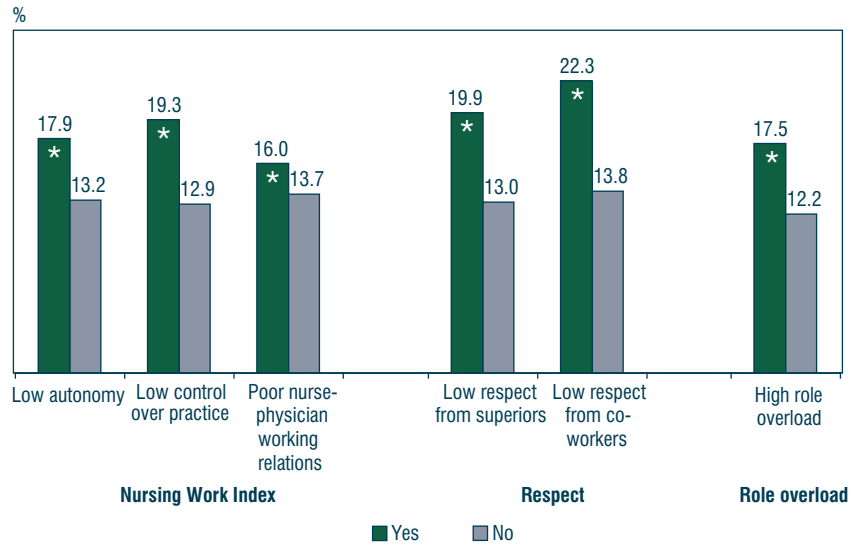
[†] The nursing job with the most weekly hours (see Definitions).
* Significantly different from estimate for "No" ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.

Respect from superiors/co-workers was also related to work absence. About one-fifth of nurses who perceived a lack of respect from either their superiors or their co-workers had been absent for at least 20 days (Chart 6.6). The relationship with low respect from superiors persisted in multivariate analysis. The odds of missing 20 or more days were 50% higher for nurses receiving low respect from their superiors.

Not surprisingly, role overload was also significantly linked to work absences. Nurses who reported high role overload were more likely than those with lighter workloads to have missed at least 20 days: 18% versus 12%. Even when controlling for all other psychosocial factors, tangible work factors and potential confounders, the odds of missing this much time were 40% higher for nurses with work overload, compared with nurses without.

Percentage of nurses absent 20 or more days from their main job[†] in past year due to health problems, by Nursing Work Index, respect and role overload, Canada, 2005



[†] The nursing job with the most weekly hours (see Definitions).
 * Significantly different from estimate for "No" (p < 0.05).

Data source: 2005 National Survey of the Work and Health of Nurses.

Psychological and social aspects play key role

In summary, data from the 2005 National Survey of the Work and Health of Nurses suggest that the job-related factors most consistently related to the three variables used to reflect nurses' health are work stress, low autonomy, low control over practice, poor nurse-physician working relations, low respect from superiors and role overload. In this study, few associations between ill health and factors such as shift work or long hours emerged. However, the cross-sectional analysis presented in this report may not have captured outcomes that develop over time.



Technical appendix

Data sources

2005 National Survey of the Work and Health of Nurses

Data for the 2005 National Survey of the Work and Health of Nurses (NSWHN) were collected from October 2005 through January 2006. The survey was conducted by Statistics Canada in partnership with the Canadian Institute for Health Information and Health Canada.

The 2005 NSWHN was designed to be representative of nurses employed in nursing in Canada in the fall of 2005. Data from the survey were weighted to permit representative estimates of each of three nursing bodies—registered nurses (RNs), licensed practical nurses (LPNs) and registered psychiatric nurses (RPNs)—at the provincial level. Because of the relatively small number of nurses employed in Yukon Territory, the Northwest Territories and Nunavut, estimates were produced for the territories combined. While RNs and LPNs are employed throughout Canada, RPNs are found almost exclusively in Manitoba, Saskatchewan, Alberta and British Columbia. The survey did not include retired or unemployed nurses.



To work in a given province, a nurse must be registered there. Across Canada, 26 provincial nursing organizations and regulating bodies collect and maintain membership information for the groups of nurses (RNs, LPNs, and RPNs) employed in each province. From these organizations, Statistics Canada received membership lists that served as the sampling frame for the 2005 NSWHN. A total of 24,443 nurses were selected at random for the survey. The 2005 NSWHN sample was drawn using a stratified design to ensure adequate sample sizes for each province (and the territories combined) and for each of the three types of nurses.

An introductory letter was sent to the home address of each nurse selected to participate in the survey. Statistics Canada interviewers then attempted to contact these individuals by telephone. Nurses who participated were interviewed by telephone, using a computerized questionnaire. Only the person selected could answer the survey questions; proxy response was not permitted.

Of the 24,443 nurses selected to participate in the survey, 1,015 were classified as being out-of-scope, meaning that they were not employed in nursing at the time of the survey. Of the remaining 23,428 sampled nurses, 18,676 completed the survey, for a response rate of 80%. Response rates by type of nurse were as follows: RNs, 80.8%; LPNs, 78.4%; RPNs, 80.6%. Response rates by province/territory of registration are shown in the table below. The data were weighted to adjust for differences in response rates by type of nurse and by province/territory.

Response rates to the 2005 National Survey of the Work and Health of Nurses, by province/territory of registration

Province/Territory	Response rate (%)
N.L.	80.8
P.E.I.	78.3
N.S.	82.8
N.B.	78.7
Que.	80.5
Ont.	77.0
Man.	82.7
Sask.	81.7
Alta.	80.8
B.C.	77.7
Y.T., N.W.T., Nvt.	65.6
Canada	79.7



Canadian Community Health Survey

Whenever possible throughout this report, nurses' work characteristics and health were compared with those of all employed men and women. In most cases, comparisons were made using data from Statistics Canada's Canadian Community Health Survey (CCHS). While the 2005 CCHS, cycle 3.1, provided the basis for most of the comparisons, those for medication use were made using data from the 2003 CCHS, and those for work stress were made using data from the 2002 CCHS. Because nearly all (over 99%) nurses are aged 21 or older, estimates from the CCHS were based on data for the employed population aged 21 or older.

The 2005 CCHS covered the population aged 12 or older living in private households. It did not include residents of Indian reserves, institutions, and some remote areas; full-time members of the Canadian Armed Forces; and civilian residents of military bases. The sample was selected using the area frame designed for the Canadian Labour Force Survey. A multi-stage stratified cluster design was used to sample dwellings within this area frame. One person aged 12 or older was selected at random from each sampled household to participate in the survey. The data were collected by personal and telephone interviews conducted between January and December 2005. The majority of interviews (over 60%) were conducted by telephone. The response rate was 79%, yielding a sample of 132,947 respondents. Proxy response was accepted only if the selected respondent was unable to respond because of health problems; proxy interviews occurred for less than 2% of respondents. A more complete description of the CCHS methodology is available in a published report (Béland 2002).

Estimates from the 2005 CCHS included in this report were based on a total of 65,901 respondents (33,556 men and 32,345 women) who were employed and aged 21 or older.

The 2003 CCHS, cycle 2.1, was conducted from January to December 2003. The target population and sampling methods were the same as those for the 2005 CCHS. Most interviews (70%) for this cycle were conducted by telephone. The response rate was 80.6%, yielding a sample of 135,573 respondents. Questions on medication use were included in a module of the survey that was administered to only a subset of respondents. This module was part of sub-sample 1, which had a sample size of 38,072 respondents.

The estimates from the 2003 CCHS (sub-sample 1) used in this report were based on a total of 18,324 respondents (9,453 men and 8,871 women) who were employed and aged 21 or older.

The 2002 CCHS, cycle 1.2: Mental Health and Well-being, began in May 2002 and was conducted over eight months. The survey covered people aged 15 or older living in private dwellings in the 10 provinces. Residents of the three territories, Indian reserves, institutions, and certain remote areas, and full-time



members of the Canadian Armed Forces were excluded. The sample design was similar to that of the 2005 CCHS. Most (86%) interviews were conducted in person; the remainder, by telephone. The respondents selected were required to provide their own information; proxy responses were not accepted. The responding sample consisted of 36,984 people aged 15 or older; the response rate was 77%.

Estimates from the 2002 CCHS in this report were based on a total of 19,609 respondents (10,097 men and 9,512 women) who were employed and aged 21 or older.

Workplace and Employee Survey

Statistics Canada's Workplace and Employee (WES) survey (2003) was used to compare various employment characteristics (overtime hours, advance knowledge of working hours, and availability of employer support programs) between nurses and the overall employed population. WES does not include people who are self-employed; therefore, self-employed nurses were excluded from the NSWHN in comparisons based on WES data.

WES comprises two components—one for employers and the other for employees. For the employer component, the target population is all business locations operating in Canada (excluding Yukon Territory, Nunavut, and the Northwest Territories) that have paid employees in March of the survey year (i.e., 2003). The target population for the employee component is all employees in the selected workplaces who are working or on paid leave in March of the survey year, and who receive a Canada Revenue Agency T-4 Supplementary form. An employee who receives a T-4 slip from two different workplaces is counted twice on the WES frame. Such duplication, though rare, slightly limits the interpretation of comparisons of 2005 NSWHN estimates with those from WES.

In 2003, the WES responding samples for its two components numbered 6,565 workplaces and 20,834 employees within these workplaces. The response rate for the employer component was 83.1%; for the employee component, it was 82.7%.

Estimates from the 2003 WES in this report are based on a sample of 20,375 employees (11,248 men and 9,127 women) aged 21 or older.

Canadian Labour Force Survey

The October 2005 Labour Force Survey (LFS) was used to compare selected job characteristics (usual hours, permanency of job and union membership) in nurses and the overall employed population. The LFS is a household survey carried out monthly by Statistics Canada. Excluded from the survey are Yukon Territory, the Northwest Territories and Nunavut, persons living on Indian Reserves, full-time members of the Canadian Armed Forces and inmates



of institutions. The sample size is approximately 54,000 households per month. Information is collected from one knowledgeable household member on all household members aged 15 or older. The LFS response rate averages around 93% of eligible households.

Estimates from October 2005 LFS in this report are based on a total of 57,283 respondents who were employed and aged 21 or older (30,278 men and 27,005 women).

Notes: When comparisons were made between estimates based on the 2005 NSWHN with those from other data sources, nurses employed in the territories were included in the NSWHN sample. Although the 2005 and 2003 CCHS did cover residents of the territories, the 2002 CCHS, the 2003 WES and the October 2005 LFS did not. However, because the employed population of the territories makes up only a small percentage (under 0.5%) of Canada's employed population, the effect on comparisons is minimal.

The data for all surveys used in the analysis were weighted to be representative of the employed population aged 21 or older.

Reference

Béland Y. Canadian Community Health Survey—Methodological overview. *Health Reports* (Statistics Canada, Catalogue 82-003) 2002; 13(3): 9–14.



Limitations

The data used in the analysis are based on self-reports and were not validated against objective criteria or by direct observation. Of course, the nature of many of the questions included in the 2005 National Survey of the Work and Health of Nurses (NSWHN) necessitated responses that were subjective and based on individual perception. However, unmeasured differences among nurses (such as those arising from personal values, past experience, or personality traits) likely explain some of the observed differences in responses—especially in relation to issues such as quality of care, adequacy of staffing, co-worker support and emotional abuse. Self-report may also be somewhat problematic even for questions concerning more tangible or measurable matters—for example, height and weight. Previous research indicates that overweight and obese people tend to underreport their weight. (Booth et al. 2000, Roberts 1995)

No inference of causality or temporal ordering of variables is possible from analyses based on the NSWHN, because the data are cross-sectional. This is of particular concern in the analysis of factors such as work stress in relation to self-reported mental health. It is possible that fair/poor mental health could cause people to perceive high levels of stress at work, rather than the reverse. Furthermore, it may be that factors that were not measured in the NSWHN—such as negative affectivity—could account for both fair/poor mental health and work stress.

Few relationships were found between tangible factors related to work organization and health. However, this may be due to the cross-sectional nature of the data. It may be that people who are in poor health leave jobs that entail conditions such as shift work and long work shifts. Previous research based on data collected from people who were followed longitudinally showed shift work to be associated with numerous unfavourable physical and mental health outcomes that emerged over time, but that were not evident in cross-sectional data. (Shields 2002)

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Analytical techniques

All estimates of nurses' work characteristics and health were based on data from the 2005 National Survey of the Work and Health of Nurses (NSWHN). For analysis, NSWHN data were weighted to represent the total population of nurses in Canada in 2005: 248,063 registered nurses (RNs), 61,978 licensed practical nurses (LPNs), and 4,889 registered psychiatric nurses (RPNs). The responding sample comprised 9,704 RNs, 7,265 LPNs and 1,707 RPNs. In the table below, responding sample sizes are given for type of nurse by province of main job.

Responding sample sizes to the 2005 National Survey of the Work and Health of Nurses, by province of main job and type of nurse

Province/Territory	RN	LPN	RPN	Total
N.L.	939	689	0	1,628
P.E.I.	498	249	0	747
N.S.	944	688	0	1,632
N.B.	894	621	0	1,515
Que.	1,181	1,014	0	2,195
Ont.	1,260	953	2	2,215
Man.	871	685	377	1,933
Sask.	875	765	363	2,003
Alta.	998	831	365	2,194
B.C.	1,004	667	597	2,268
Y.T., N.W.T., Nvt.	240	103	3	346
Canada	9,704	7,265	1,707	18,676

Frequencies and cross-tabulations were used to profile the personal and socio-demographic characteristics, working conditions and health of nurses. All variables considered were cross-tabulated with sex, age group, type of nurse, work setting and province/territory. Because the distribution of type of nurse was inconsistent across work settings (for example, LPNs were more likely to work in long-term care facilities than were RNs or RPNs), some of the associations with work setting that emerged in bivariate analysis—such as the higher likelihood of low household income among nurses employed in long-term care facilities—might have been explained by the distribution of types of nurses working in these settings. Therefore, work setting was examined using multivariate analysis in relation to the dependent variable, controlling for type of nurse. Throughout the report, only those relationships with work setting that persisted when controlling for type of nurse (indicating that work setting was independently associated with the dependent variable of interest) are mentioned.



Multivariate logistic regression models were used to assess associations between nurses' health and factors reflecting tangible and psychosocial aspects of nurses' work. Two sets of models were used. In the first set, health (considered separately as general health, mental health and health-related absences from work) was examined in relation to tangible factors (type of shift, number of shift changes, multiple job holding, long working hours, work setting and union membership). To control for potential confounders, the following variables were included: sex, age, type of nurse, household income, smoking status, obesity and province. In the second set of models, health was examined in relation to psychosocial factors (work stress factors, Nursing Work Index factors, respect from superiors and co-workers, and role overload). The same control variables were used, as well as the tangible work-related factors mentioned above.

Whenever possible, estimates of nurses' work characteristics and health were compared with estimates for all employed men and women. Comparisons were made using data from a variety of Statistics Canada's surveys: the 2005 Canadian Community Health Survey (CCHS), (cycle 3.1); the 2003 Canadian Community Health Survey (CCHS), (cycle 2.1); the 2002 CCHS (cycle 1.2); the 2003 Workplace and Employee Survey (WES), employee file; and the October 2005 Canadian Labour Force Survey (LFS). For all estimates from the surveys, the data were weighted to be representative of the Canadian adult population. Since nearly all (over 99%) of nurses are aged 21 or older, comparisons with estimates from other surveys were based on the employed population aged 21 or older.

To account for survey design effects, estimates of variance on estimates from the NSWHN, the 2002, 2003 and 2005 CCHS and the 2003 WES were generated using the bootstrap technique (Rao et al. 1992, Rust and Rao 1996). For the LFS, variance was estimated by using the formula for simple random sampling with the incorporation of an estimate of a design effect to account for the survey's complex design. When testing for significance between estimates, a p-value of less than 0.05 was specified.

References

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Reliability measures of scales

[Note: The following description of reliability measures for scales was excerpted from the *National Longitudinal Survey of Children and Youth, Cycle 5 – User Guide*.]

Reliability refers to the accuracy, dependability, consistency, or ability to replicate a particular scale. In more technical terms, reliability refers to the degree to which the scale scores are free of measurement error. There are many ways to measure reliability.

Cronbach's alpha

One of the most commonly used reliability coefficients is Cronbach's alpha (Cronbach and Warrington 1951), a measure of the internal consistency of the items within the factor. It is based on the average covariance of items. It is assumed that items within a factor are positively correlated with each other because they are attempting to measure, to a certain extent, a common entity or construct.

Cronbach's alpha can be viewed as an estimate of the correlation between the total score across a series of items from a rating scale and the total score that would have been obtained had a comparable series of items been employed.

Another interpretation of Cronbach's alpha is the squared correlation between the score an individual obtains on a particular factor (the observed score) and the score he or she would have obtained if questioned on all possible items in the universe (the true score). Since alpha is interpreted as a correlation coefficient, it ranges from 0 to 1. Generally, it has been shown that alpha is a lower bound to the reliability of a scale of n items (Novick and Lewis 1967). In other words, in most situations, alpha provides a conservative estimate of a score's reliability.

Satisfactory reliability

It is difficult to specify a single level that should apply in all situations. Some researchers believe that reliabilities for widely used scales should not be below 0.8. At that level, correlations are affected very little by random measurement error. At the same time, it is often costly in terms of time and money to obtain a higher reliability coefficient. For some of the factors for which scores were computed for the National Survey of the Work and Health of Nurses (NSWHN), reliabilities are below the 0.8 level. The Cronbach's alpha for each score calculated is provided below. Researchers can determine for themselves if a score has adequate reliability for their specific purposes.

Finally, the Cronbach's alpha for each factor score in the NSWHN was computed using SAS software. Typically, the alpha coefficients calculated using SAS are lower than those calculated using SPSS.



NSWHN scales

The following table gives estimates of Cronbach's alpha for each scale included in the NSWHN.

Scale	Items	Cronbach's alpha (raw)	Item that lowers Cronbach's alpha the most when excluded	Cronbach's alpha with item excluded
Nursing Work Index Autonomy scale	<p>The supervisory staff is supportive of nurses. (WI_Q03)</p> <p>Nursing controls its own practice. (WI_Q04)</p> <p>I have the freedom to make important patient care and work decisions. (WI_Q09)</p> <p>I am not placed in a position of having to do things that are against my nursing judgment. (WI_Q10)</p> <p>I have a nurse manager or immediate supervisor who backs up the nursing staff in decision-making, even if the conflict is with a physician. (WI_Q12)</p>	0.934	WI_Q09	0.909
Nursing Work Index Control over practice scale	<p>Adequate support services allow me to spend time with my patients. (WI_Q01)</p> <p>There is enough time and opportunity to discuss patient care. (WI_Q05)</p> <p>There are enough nurses on staff to provide quality patient care. (WI_Q06)</p> <p>I have a nurse manager or immediate supervisor who is a good manager and leader. (WI_Q07)</p> <p>There is enough staff to get the work done. (WI_Q08)</p> <p>I am given the opportunity to work on highly specialized patient care units. (WI_Q14)</p> <p>I am given assignments that foster continuity of care, that is, I continue to care for the same patient one day to the next. (WI_Q15)</p>	0.905	WI_Q05	0.879

Scale	Items	Cronbach's alpha (raw)	Item that lowers Cronbach's alpha the most when excluded	Cronbach's alpha with item excluded
Nursing Work Index Nurse-physician working relations scale	<p>Physicians and nurses have good working relations. (WI_Q02)</p> <p>There is a lot of team work between nurses and physicians. (WI_Q11)</p> <p>There is collaboration between nurses and physicians. (WI_Q13)</p>	0.959	WI_Q13	0.933
Concerns about risk of exposure to infectious diseases	<p>My organization takes all the necessary precautions to prevent the spread of infectious diseases in my unit/workplace. (Reverse scored.) (EX_Q01)</p> <p>I am concerned about the ability of my organization to effectively control an infectious disease outbreak if it occurs in my unit/workplace. (EX_Q02)</p> <p>I am concerned about my own personal risk of contracting a serious infectious disease in my unit/workplace. (EX_Q03)</p> <p>I am concerned about the availability of personal protective equipment, like masks, from my organization if an infectious disease outbreak occurs. (EX_Q04)</p> <p>I am concerned about the effectiveness of existing personal protective equipment if a new outbreak occurs. (EX_Q05).</p>	0.823	EX_Q05	0.760
Role overload	<p>I often have to arrive early or stay late to get my work done. (RO_Q01)</p> <p>I often have to work through my breaks to complete my assigned workload. (RO_Q02)</p> <p>It often seems like I have too much work for one person to do. (RO_Q03)</p> <p>I am given enough time to do what is expected of me in my job. (Reverse scored.) (RO_Q04)</p> <p>I have too much to do, to do everything well. (RO_Q05)</p>	0.841	RO_Q03	0.785



Scale	Items	Cronbach's alpha (raw)	Item that lowers Cronbach's alpha the most when excluded	Cronbach's alpha with item excluded
Work stress Psychological demands	Your job was very hectic. (WS_Q05) You were free from conflicting demands that others made. (Reverse scored). (WS_Q06)	0.351	n/a	
Work stress Skill discretion	Your job required that you learn new things. (WS_Q01) Your job required a high level of skill. (WS_Q02) Your job required that you did things over and over. (Reverse scored). (WS_Q04)	0.230		Negative value
Work stress Decision authority	Your job allowed you freedom to decide how you did your job. (WS_Q03) You had a lot to say about what happened in your job. (WS_Q09)	0.543	n/a	
Work stress Co-worker support	You were exposed to hostility or conflict from the people you worked with. (Reverse scored) (WS_Q10) The people you worked with were helpful in getting the job done. (WS_Q12)	0.347	n/a	



For the work stress scales, the estimates of Cronbach's alpha are particularly low. Previous assessments based on all items from Karasek's Job Content Questionnaire, (Karasek et al. 1998) which contains more items for each of these scales than does the NSWHN, have reported internal consistency estimates of 0.7 or more for all sub-scales. (Bourbonnais et al. 1999; Hellerstedt and Jeffery 1997; Karasek et al. 1998) The relatively low estimates of internal consistency found here are in part due to the limited number of questions included in the subscales used in the NSWHN. Somewhat unexpectedly, one of the items within the skill discretion subscale was negatively correlated with the total score. As a result, the Cronbach's alpha was negative when some items were removed.

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Definitions

Chapter 1: Canada's nurses

Nurse, type of nurse

The target population for the 2005 National Survey of the Work and Health of Nurses (NSWHN) was **regulated nurses**, the largest occupational group in Canada's health sector. To be included in the survey, each nurse had to be registered with a provincial nursing college, association or council, and either be working as a nurse or temporarily absent from a position in nursing. Nurses who had a nursing job but were not working at the time of the survey were defined as **temporarily absent**.

There are three categories of regulated nurses in Canada: **registered nurses (RNs)**, **registered psychiatric nurses (RPNs)**, and **licensed practical nurses (LPNs)**. In Ontario, nurses with credentials equivalent to those of licensed practical nurses elsewhere are called "registered practical nurses." In this report, Ontario's registered practical nurses are included in the LPN category. RNs and LPNs practice in every province and territory; RPNs practice almost exclusively in Manitoba, Saskatchewan, Alberta and British Columbia.

RNs practice in a variety of nursing domains including direct care (clinical), education, administration, and research. Some of their areas of responsibility include medical care, surgical care, obstetrics, psychiatric care, critical care, pediatrics, geriatrics, community health, occupational health, emergency care, health promotion, rehabilitation and oncology.

LPNs work independently or in partnership with other members of the health care team to provide nursing services to individuals, families and groups of all ages. The majority are employed in hospitals or long-term care facilities. The most common area of responsibility for LPNs is geriatrics/long-term care.

RPNs provide services to individuals 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.

Patient

The term **patient** refers to patients, clients and residents.

Type of care

Type of care provided was ascertained by asking nurses, "Do you work in direct or non-direct patient care?" According to their responses, nurses were categorized as providing **direct** or **indirect care**; those who provided both direct and non-direct care were categorized as providing direct care.



Two follow-up questions were used to establish the specific **type of direct care** provided, depending on work setting. Nurses who worked in hospitals were asked, “What unit or department do you work in (for example, maternal/newborn, emergency care, medical/surgical, palliative care)?” Nurses who worked in other settings were asked, “What type of nursing do you do (for example, community health care, palliative care, rehabilitation)?” Look-up tables and coding were used to assign specific types of care.

Nurses who provided **indirect care** only were asked to indicate their primary area of responsibility (administration/management, education, research or other).

Work setting

Work setting was determined by asking respondents, “What type of facility do you work in: a **hospital, long-term care facility, community health facility** or **other**?” “Other” includes physicians’ offices, private nursing agencies, educational institutions, governments and associations.

Province/Territory

In this report, province/territory refers to the location of the main job, which is not necessarily where the nurse resides.

Household income, quintiles

To estimate the proportion of nurses with low and high **household incomes**, comparisons were made with estimates from the 2005 CCHS.

First, CCHS data were used to determine cut-points for income quintiles specific to each province or to the combined territories, for the employed population aged 21 or older. An equivalence score method was used that adjusts household income by household size. This method was developed at Statistics Canada (Carson 2002) and uses a weight factor based on a concept called the “40/30” rule. For each CCHS respondent, a household weight factor was calculated based on household size. The first household member was assigned a weight of 1, the second member a weight of 0.4, and the third and subsequent members a weight of 0.3. The household weight factor was then calculated as the sum of these weights. For example, the household weight factor for a household of five members would be 2.3 (1 + 0.4 + 0.3 + 0.3 + 0.3). Household income was then divided by this household weight factor to derive **income adjusted for household size**. The weighted distribution of the 2005 CCHS data for the employed population aged 21 or older was examined to establish cut-points for household income quintiles within each province or the combined territories.



Lowest and highest quintile cut-points[†] for household income adjusted for household size, by province/territory, Canada, 2005

Province/Territory	Lowest quintile: less than or equal to	Highest quintile: equal to or greater than
N.L.	\$21,000	\$57,000
P.E.I.	\$22,000	\$51,000
N.S.	\$22,000	\$57,000
N.B.	\$21,000	\$54,000
Que.	\$25,000	\$61,000
Ont.	\$26,000	\$71,000
Man.	\$24,000	\$57,000
Sask.	\$24,000	\$61,000
Alta.	\$27,000	\$72,000
B.C.	\$25,000	\$64,000
Y.T., N.W.T., Nvt.	\$31,000	\$86,000

[†] Rounded to the nearest \$1,000.

Data source: 2005 Canadian Community Health Survey (CCHS), cycle 3.1.

Then, using the same methodology on data from the NSWHN, nurses' household incomes were adjusted for household size. Since the NSWHN collected information on household income in ranges, rather than exact amounts, the mid-point of the reported range was used for calculating adjusted incomes. When household income was missing from a nurse's record, the information was imputed. Within each province and the territories, nurses were classified as having "low" or "high" household income, based on the lowest and highest quintile cut-points derived from the CCHS data; 6.6% of nurses were categorized as having a low household income and 29.3%, a high household income.

Overweight/Obese and body mass index

Body mass index (BMI) is a measure of weight adjusted for height. BMI is calculated by dividing weight in kilograms by the square of height in metres. The BMI of nurses was derived from self-reports of weight and height. Two BMI categories were defined, based on standards adopted by Health Canada for classifying excess weight in the adult population (Health Canada 2003). The categories were: **overweight** (BMI 25.0 to 29.9) and **obese** (BMI 30.0 or more). BMI was not calculated for nurses who reported that they were pregnant.

In the analysis, the percentages of nurses who were either overweight or obese (BMI 25.0 or more) or obese (BMI 30.0 or more) were compared with corresponding percentages of all employed people aged 21 or older, using estimates from the 2005 CCHS (cycle 3.1), which were also based on self-reported weight and height.



Smoking

Nurses were asked about their cigarette smoking habits; **smokers** were categorized as **daily** or **occasional**. Estimates of the proportions of nurses who smoked daily or who smoked at all (daily or occasionally) were compared with those for the general employed population from the 2005 CCHS.

Alcohol consumption, regular drinking

Nurses were asked if they had consumed any alcohol (a drink of beer, wine, liquor or any other alcoholic beverage) during the past 12 months. Those who had were asked to report the **frequency of alcohol consumption** according to the following response categories:

- “less than once a month”
- “once a month”
- “2 to 3 times a month”
- “once a week”
- “2 to 3 times a week”
- “4 to 6 times a week”
- “every day.”

Estimates of the percentage of nurses who consumed alcohol at least twice a week (that is, nurses whose responses fell into any of the last 3 answer categories) were produced, and compared with corresponding estimates for the employed population aged 21 or older that were based on data from the 2005 CCHS.

Chapter 2: Employment, job and workplace characteristics

Main job

Some nurses hold more than one nursing job. For the NSWHN, questions about the respondent’s job all refer to the **main job**, defined as the nursing job at which the most hours were usually worked per week at the time of the interview. However, for respondents selected from the registration lists of Yukon Territory, Northwest Territories, or Nunavut, the main job was defined as their job in the North, even if the respondent had a second job outside the North at which they usually worked more hours per week. This exception was made to increase the sample size in the North. In comparisons of nurses with the overall employed population based on data from the Canadian Labour Force Survey or the Canadian Community Health Survey, “main job” refers to the job at which the most hours per week were spent.



Respondents were categorized as **self-employed** if they indicated that their main job was part of their own business—meaning that they ran it and paid themselves. Nurses who were not self-employed were referred to as **employees**.

Characteristics of main job

A **permanent job** was based on the response to the question, “Is this position permanent, temporary, casual/on-call or are you self-employed?” The percentage of nurses with a permanent job was compared with the corresponding percentage for all employed individuals aged 21 or older, based on estimates from the Canadian Labour Force Survey (LFS) (October 2005). The LFS asks, “Is your job permanent, or is there some way it is not permanent? (e.g., seasonal, temporary, casual, etc.)”.

Full-time or **part-time** status of the main job was established by asking respondents if they worked full or part time. This differs from other Statistics Canada surveys that base full-time/part-time status on usual hours worked per week.

Union coverage/collective agreement was assessed with the question, “Are you a member of a union, or covered by a union contract or collective agreement?” This question was not asked of nurses who were self-employed in their main job. Comparisons were made with estimates from the LFS, which asks, “Are you a union member?” and, if not, “Are you covered by a union contract or collective agreement?”

Hours of work

To establish **usual hours of work at the main job** (excluding overtime), nurses were asked, “Excluding overtime, how many paid hours do you usually work per week?” The average number of hours per week, excluding overtime, was compared with corresponding estimates from the October 2005 LFS, which asks a similar question.

Paid and unpaid overtime hours at the main job were determined with the questions, “How many hours of paid overtime do you usually work per week?” and “How many hours of unpaid overtime do you usually work per week?” Overtime hours were compared with estimates from the 2003 Workplace and Employee Survey (WES). Self-employed nurses were excluded from this comparison because the WES does not include the self-employed population. In the NSWHN, nurses were asked, “Do you feel your employer expects you to work extra hours?” This question was not asked of self-employed nurses.

Total hours usually worked at main job (including overtime) was derived by summing usual hours (excluding overtime), paid overtime hours and unpaid overtime hours. Total hours worked by nurses were compared with corresponding estimates for all employed people from the 2005 CCHS. The CCHS asks respondents the following question to derive total hours at their



main job, “About how many hours a week do you usually work at your job or business? If you usually work extra hours, paid or unpaid, please include these hours.”

Multiple job holders

Nurses with two or more jobs at the time of the survey were classified as **multiple job holders**. Questions were asked about other nursing jobs as well as jobs or businesses outside nursing. The percentage of nurses with multiple jobs was compared with corresponding estimates from the 2005 Canadian Community Health Survey (CCHS). The CCHS asks about jobs held in the week before the interview.

For multiple job holders, **total hours worked at all jobs combined** was derived by summing the total hours worked at the main job and the total hours at all other jobs. Differences between nurses and all employed individuals were identified using data from the 2005 CCHS.

Advance knowledge of weekly hours

Advance knowledge of weekly hours was assessed with the question, “How far in advance do you know your weekly hours of work?” The response categories were: “always known,” “more than one month (more than 31 days),” “one month (22 to 31 days),” “3 weeks (15 to 21 days),” “2 weeks (8 to 14 days),” “1 to 7 days,” or “less than 1 day.” Estimates for nurses were compared with estimates for employees covered by the 2003 WES. Because the WES does not include self-employed workers, self-employed nurses were not included in this comparison.

Shifts

Usual shift for the main job was determined with the question, “Do you usually work days, evenings or nights?” Four response categories (days, evenings, nights and mixed shifts) were available to interviewers, but only the first three were read to respondents; “mixed shifts,” was not.

To measure **length of shift**, nurses were asked, “Do you usually work ... an 8-hour shift, a 12-hour shift, some other shift or various shifts?” Those who responded “some other shift,” were asked to specify the number of hours they usually worked per shift. Nurses were classified as working a **12-hour shift** if their response to the first question was a 12-hour shift, or their response to the subsequent question indicated that their usual shift was more than 12 hours.

To measure **frequency of shift changes**, nurses were asked, “In the past two weeks, how many times did you change shifts (for example, from days to evenings, or evenings to nights)?”



Flexibility in days and hours worked

Flexibility in days/hours worked was measured with the questions:

- “Does your employer offer flexibility in the **days** nurses can choose to work?”
- “Does your employer offer flexibility in the **hours** nurses can choose to work?”

Employer-supported programs

Respondents who were employees were asked the following questions about employer-supported programs offered at their main job:

- “Does your employer offer **help for childcare** either through an on-site centre or assistance with external suppliers or informal arrangements?”
- “Does your employer offer **employee assistance**, such as counselling, substance abuse control, financial assistance, legal aid, etc.?”
- “Does your employer offer **fitness and recreation** services (on-site or off-site)?”
- “Does your employer provide a place where staff can purchase **healthy food**?” Respondents who answered “yes,” were asked, “Is this service available 24 hours a day?” Respondents who answered “no” to this question were asked, “Is this service available during the shifts you work?”

For childcare, employee assistance and fitness and recreation, comparisons between nurses and all employees were made using data from the 2003 WES. In the WES, an introductory question preceded questions on the specific programs: “Does your employer offer personal support or family services such as childcare, employee assistance, eldercare, fitness and recreation services or other types of services?” Respondents who replied “no” to this question were assumed not to have the three specific types of programs (childcare, employee assistance, and fitness and recreation) available to them.

Chapter 3: Nursing care—quality, risks and workload pressures

Quality of care

Questions on perception of **quality of care** were asked of nurses who provided direct care in their main job. Nurses were asked to respond to three questions about the quality of care delivered during their last shift.

Inadequate staffing level was defined as a negative response to the yes/no question, “Do you think the staffing level was adequate?”



Quality of care delivered by the nursing team was assessed with the question, “Overall, how would you describe the quality of nursing care delivered by your nursing team during that shift . . . excellent, good, fair or poor?” Responses were classified into two groups: “excellent” or “good,” and “fair” or “poor.”

Quality of care delivered by the nurse was assessed with the question, “How would you describe the quality of nursing care you provided during that shift . . . excellent, good, fair or poor?” Again, responses were classified into two groups: “excellent” or “good,” and “fair” or “poor.”

To assess quality of care in relation to type of shift, nurses were asked “Was your last shift during the day, evening or night?”

Changes in quality of care

Nurses were asked about **changes in quality of patient care** over the past year: “Overall, in the past 12 months, would you say the quality of patient care in your unit/workplace has . . . improved, remained the same, or deteriorated?” Those who reported “improved” were asked, “Why do you feel that care has improved?” Multiple responses were accepted, and responses were categorized as follows:

- More staff
- Fewer patients / residents / clients
- Improved communication
- Adequate / More supplies
- Equipment available and/or improved
- More / Improved training
- Improved management / Reorganization
- Other

Similarly, nurses who responded that they felt the quality of patient care in their unit/workplace had “deteriorated” were asked why. Again, multiple responses were permitted, and responses were categorized as follows:

- Fewer staff
- Too many patients / residents / clients
- Poor communication
- Fewer / Not enough supplies
- Equipment not available or not working
- Less / Not enough training
- Inexperienced staff
- Other



Adverse events

Quality of care was also assessed by asking about specific adverse events among nurses or patients in their direct care over the past 12 months. Nurses were asked, “In the past 12 months, how often would you say:

- a patient received the wrong medication or dose?”
- incidents of nosocomial infections occurred?”
- complaints were received from patients or their families?”
- a patient was injured during a fall?”
- you were injured while working?”

Response categories were, “never,” “rarely,” “occasionally,” and “frequently;” for each event, the percentage of nurses reporting occasional or frequent occurrence was estimated.

Needlestick or other sharps injuries

Occurrence of **needlestick or other sharps injuries** was measured by the question, “Have you ever been stuck with a needle or sharp object that has been used on a patient?” A follow-up question asked about the number of occurrences in the past 12 months.

Lifting or transferring patients

Questions on work equipment were asked of nurses who provided direct care in their main job. To assess the need for equipment, nurses were first asked if their **job involved lifting or transferring patients**. **Access to and availability of equipment** was measured with the following questions:

- “Do you have access to mechanical lifting devices such as floor or ceiling lifts for patient handling?”
- “How often are the mechanical lifting devices for patient handling available when you need them ... always, often, sometimes or seldom?”

Physical assault

Occurrence of **physical assault** was measured by asking the yes/no questions, “During the past 12 months, did you experience a physical assault from a patient?” and “During the past 12 months, did you experience a physical assault from someone other than a patient while working?”

Emotional abuse

Similarly, occurrence of **emotional abuse** was measured by asking the questions, “During the past 12 months, did you experience emotional abuse from a patient?” and “During the past 12 months, did you experience emotional abuse from someone other than a patient while working?”



Nurses who indicated that they had experienced emotional abuse from someone other than a patient were asked to identify this person as a “visitor,” “physician,” “nursing co-worker,” “manager,” “another co-worker,” “student,” or “other.” Multiple responses were accepted.

Risk of exposure to infectious diseases

Questions on exposure to risk were asked of nurses who provided direct care in their main job. To measure concern about **risk of exposure to infectious diseases**, nurses were asked to respond to the following five statements, on a four-point scale: “strongly agree” (score 3), “agree” (2), “disagree” (1), “strongly disagree” (0):

- “My organization takes all the necessary precautions to prevent the spread of infectious diseases in my unit/workplace.” (Reverse scored.)
- “I am concerned about the ability of my organization to effectively control an infectious disease outbreak if it occurs in my unit/workplace.”
- “I am concerned about my own personal risk of contracting a serious infectious disease in my unit/workplace.”
- “I am concerned about the availability of personal protective equipment, like masks, from my organization if an infectious disease outbreak occurs.”
- “I am concerned about the effectiveness of existing personal protective equipment if a new outbreak occurs.”

A total score (with a possible range of 0 to 15) for concern about risk of exposure to infectious diseases was calculated by summing the scores for the five items; higher scores indicated more perceived risk.

Role overload

To measure role overload, respondents were asked to react to five statements, on a five-point scale by choosing from the following possible responses: “strongly agree” (score 4), “agree” (3), “neither agree nor disagree” (2), “disagree” (1), “strongly disagree” (0). The statements were:

- “I often have to arrive early or stay late to get my work done.”
- “I often have to work through my breaks to complete my assigned workload.”
- “It often seems like I have too much work for one person to do.”
- “I am given enough time to do what is expected of me in my job.” (Reverse scored.)
- “I have too much to do, to do everything well.”



A total role overload score (with a possible range of 0 to 20) was calculated by summing the scores for the five items, with higher scores indicating more role overload. Respondents scoring 16 or higher were classified as having **role overload**. This cut-point was selected to be as close as possible to the highest quartile of the weighted distribution of scores; 27.8% of nurses were classified as having role overload.

Chapter 4: Work environment—stress, collaboration and respect

Work stress

All work stress questions referred to the nurse's main job.

Jobs that are hypothesized to be the most stressful are “high-strain” jobs (Karasek et al. 1979)—those that place high demands on the workers but offer them few opportunities to use skills and make decisions.

To measure **job strain**, survey respondents chose from possible responses of “strongly agree,” “agree,” “neither agree nor disagree,” “disagree,” or “strongly disagree” to the following statements:

- a) “Your job required that you learn new things.”
- b) “Your job required a high level of skill.”
- c) “Your job allowed you freedom to decide how you do your job.”
- d) “Your job required that you do things over and over.” (Reverse scored.)
- e) “Your job was very hectic.”
- f) “You were free from conflicting demands that others made.” (Reverse scored.)
- g) “You had a lot to say about what happened in your job.”

A score was derived for each of the three components of job strain: **psychological demands**, based on items (e) and (f); **decision authority**, based on (c) and (g); and **skill discretion**, based on (a), (b) and (d). Scores were calculated by assigning a value between 4 (strongly agree) and 0 (strongly disagree) to each item and then summing the item scores for each component. The scoring algorithm was created so that higher scores indicated higher psychological demands, higher decision authority or higher skill discretion; thus, the scoring for items (d) and (f) was reversed. Scores were adjusted (pro-rated) so that each respondent had a potential maximum score of 10 for each of the three components.

A score for **decision latitude** was then calculated by summing the scores for decision authority and skill discretion. The job strain ratio was calculated by dividing the adjusted score for psychological demands by that of decision latitude. Since both the numerator and denominator were pro-rated to be a



maximum of 10, this ensured that the potential contributions of psychological demands and decision latitude were equal. A small constant (0.1) was added to the numerator and denominator to avoid division by 0. Respondents were classified for this analysis as having high **job strain** if the value of the ratio was 1.2 or higher.

In many studies of associations between job strain and health, job strain has been defined as those scores that fall above the median on demands and below the median on latitude. Using a quotient to measure job strain is a relatively new approach, but it allows more flexibility in choosing cut-points to classify high-strain jobs. (Schnall et al., 1994). Both the “quotient” and “median” approaches are congruent with theory. [Note: The derived variable for job strain used in the analysis for this report differs slightly from the job strain variable on the 2005 NSW HN data file.]

The following two items were used to measure co-worker support:

- “You were exposed to hostility or conflict from the people you work with.”
- “The people you work with were helpful in getting the job done.”

The answer categories were the same as those used for the job strain items (“strongly agree,” “agree,” “neither agree nor disagree,” “disagree,” or “strongly disagree”). Respondents were classified as having **low co-worker support** if they indicated “strongly agree” or “agree” in response to the first item, or “disagree” or “strongly disagree” in response to the second item.

Supervisor support was measured with the item,

- “Your supervisor is helpful in getting the job done.”

Respondents were classified as having **low supervisor support** if they indicated “disagree” or “strongly disagree” in response to this item.

Physical demands were measured with the item,

- “Your job required a lot of physical effort.”

Respondents were classified as having **high physical demands** if they indicated “agree” or “strongly agree” in response to this item.

Job security was measured with the item,

- “Your job security was good.”

Respondents were classified as having **low job security** if they indicated “disagree” or “strongly disagree” in response to this statement.

The percentage of nurses reporting work stress was compared with the corresponding percentage for all employed people aged 21 or older, using data from the 2002 CCHS.



Nursing Work Index

The Nursing Work Index (NWI) is a set of measures developed to study the nursing practice environment. Three components of the NWI were included in the NSWHN: **autonomy**, **control over practice**, and **nurse-physician working relations**. Nurses were asked to react to 15 statements on a four-point scale: “strongly agree” (score 3), “somewhat agree” (2), “somewhat disagree” (1), “strongly disagree” (0). The statements were read to nurses who were employees and provided direct care in their main job.

The following five statements were used to measure **autonomy**:

- “The supervisory staff is supportive of nurses.”
- “Nursing controls its own practice.”
- “I have the freedom to make important patient care and work decisions.”
- “I am not placed in a position of having to do things that are against my nursing judgment.”
- “I have a nurse manager or immediate supervisor who backs up the nursing staff in decision-making, even if the conflict is with a physician.”

The following seven statements were used to measure **control over practice**:

- “Adequate support services allow me to spend time with my patients.”
- “There is enough time and opportunity to discuss patient care.”
- “There are enough nurses on staff to provide quality patient care.”
- “I have a nurse manager or immediate supervisor who is a good manager and leader.”
- “There is enough staff to get the work done.”
- “I am given the opportunity to work on highly specialized patient care units.”
- “I am given assignments that foster continuity of care; that is, I continue to care for the same patient one day to the next.”

The following three statements were used to measure **nurse-physician working relations**:

- “Physicians and nurses have good working relations.”
- “There is a lot of team work between nurses and physicians.”
- “There is collaboration between nurses and physicians.”

A total score for each of the three components was calculated by summing the scores of the items within the component. In some cases, respondents indicated that a statement was not applicable to their situation. To maximize the number of respondents for whom scores were calculated, one “not applicable” response was accepted—both for the autonomy and the nurse-physician



working relations scales, and two were accepted for the control-over-practice scale. A score was calculated based on the items with responses and then adjusted to compensate for the item(s) with the “not applicable” response.

Autonomy scores could range from 0 to 15, with higher scores indicating more autonomy. Respondents with a score of 8.75 or less were classified as having **low autonomy**.

Control-over-practice scores could range from 0 to 21, with higher scores indicating more control. Respondents with a score of 8.4 or less were classified as having **low control over practice**.

Nurse-physician working relations scores could range from 0 to 9, with higher scores indicating better relations. Respondents with a score of 5 or less were classified as having **poor nurse-physician working relations**.

The cut-points used to categorize low scores for each of the components were selected to be as close as possible to the lowest quartile of the weighted distribution of scores; 25.1% of nurses were classified as having low autonomy, 23.9% were classified as having low control over practice, and 21.6% were classified as having poor nurse-physician working relations.

Respect and support

Three aspects of respect and support were measured in the NSWHN: **respect from superiors**; **respect from colleagues**; and **respect and prestige, considering efforts and achievements**. The following statements were read to nurses who were employees and who provided direct care in their main job:

- “I receive the respect I deserve from my superiors.”
- “I receive the respect I deserve from my colleagues.”
- “Considering all my efforts and achievements, I receive the respect and prestige I deserve.”

For each item, survey respondents chose from possible responses of “strongly agree,” “somewhat agree,” “somewhat disagree,” or “strongly disagree.” Responses of “somewhat disagree” or “strongly disagree” were defined as **lack of respect**.

Job dissatisfaction

Dissatisfaction with main job was assessed by asking nurses, “On the whole, how satisfied are you with this job . . . very satisfied, somewhat satisfied, somewhat dissatisfied, very dissatisfied?” **Dissatisfaction with being a nurse** was assessed with the question, “Independent of your present position, how satisfied are you with being a nurse . . . very satisfied, somewhat satisfied, somewhat dissatisfied, very dissatisfied?” For both items, dissatisfaction was defined as a response of “somewhat dissatisfied” or “very dissatisfied.”



Comparisons between the proportions of nurses and employed people aged 21 or older who were dissatisfied with their main job were made using data from the 2002 CCHS.

Chapter 5: Physical and mental health

Chronic conditions

To determine the prevalence of selected chronic conditions, respondents were asked if they had specific “long-term health conditions that have lasted or are expected to last six months or more that have been diagnosed by a health professional.” Respondents were read a list of conditions, the following of which were considered in the analysis:

- allergies
- asthma
- fibromyalgia
- arthritis or rheumatism (excluding fibromyalgia)
- back problems (excluding fibromyalgia and arthritis)
- high blood pressure
- high cholesterol
- migraine
- diabetes
- heart disease
- cancer
- stomach or intestinal ulcers
- a sleep disorder (such as sleep apnea)
- a bowel disorder (such as Crohn’s Disease or colitis)
- a thyroid condition
- chronic fatigue syndrome
- multiple chemical sensitivities

Prevalence estimates of these chronic conditions were produced for nurses. With data from the 2005 CCHS, comparisons between nurses and all employed people aged 21 or older were made for all chronic conditions except high cholesterol and sleep disorder (these conditions were not included in the 2005 CCHS).

The total number of conditions present in each nurse was calculated by summing the number of conditions reported. The average number of conditions was calculated, as well as the percentage of nurses reporting three or more. High cholesterol and sleep disorders were not included in these estimates in order to have comparable estimates for the NSWHN and the 2005 CCHS.



Pain

The prevalence of activity-limiting **pain** in nurses was measured with this question: “In the past 12 months, have you had any pain or discomfort, aching or tingling anywhere in your body that prevented you from carrying out your normal activities, for example, work, housework, or hobbies?” A follow-up question asked about the part of the body (“neck or shoulder,” “arm, wrist or hand,” “back or buttocks,” “hips, thighs, legs, knees or feet,” “head,” “whole body,” “multiple sites,” “other”) where the pain or discomfort was most serious. **Severity of pain** was assessed by asking, “How would you describe your pain in this body area during the past 12 months ... mild, moderate, severe or unbearable?” Estimates were provided of the percentage of nurses reporting “severe” or “unbearable” pain.

The **frequency with which pain limited the ability to do the job as a nurse** was measured by asking “In the past six months, how often did the pain in this body area limit or reduce your ability to do your job as a nurse . . . not at all, some of the time, most of the time, or all of the time?” Interference with nursing tasks due to pain was defined as a response of “some of the time,” “most of the time” or “all of the time.”

To ascertain the activity that had given rise to the pain, nurses were asked, “In your opinion, was the pain in this body area the result of

- work-related factors?”
- non-work-related factors?”
- both work- and non-work-related factors?”

Nurses who indicated the first or third answer category were defined as having work-related pain.

Factors giving rise to work-related pain were determined by asking nurses if these “work-related factors include:

- patient transfer activities such as lifting or turning?”
- moving equipment while at work?”
- repetitive movements while working?”
- awkward postures while working?”
- a traumatic event such as an assault while at work?”
- other work-related factors?”

Multiple responses were permitted.

Depression

Using the methodology of Kessler et al. (Kessler et al. 1994), history of a major depressive episode (MDE) was measured using a subset of questions from the Composite International Diagnostic Interview. These questions cover a cluster



of symptoms for a depressive disorder, which are listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R) (American Psychiatric Association 1987).

Two screening questions were used for the depression module. The first was,

- “During the past 12 months, was there ever a time when you felt sad, blue, or depressed for two weeks or more in a row?”

Respondents who replied “yes” to this question were instructed to “think about the 2-week period during the past 12 months when these feeling were the worst,” in reference to the following questions:

1. “During that time how long did these feelings usually last . . .all day long, most of the day, about half of the day, or less than half the day?” (Respondents who replied “about half of the day” or “less than half the day” were not asked questions 2 to 11).
2. “How often did you feel this way during those two weeks . . . every day, almost every day, or less often?” (Respondents who replied “less often” were not asked questions 3 to 11.)
3. “During those two weeks did you lose interest in most things?” (yes / no)
4. “Did you feel tired out or low on energy all of the time?” (yes / no)
5. “Did you gain weight, lose weight, or stay about the same?” (“gained weight,” “lost weight,” “stayed about the same,” “was on a diet.”)
6. “About how much did you gain/lose?” (not asked if the respondent was on a diet)
7. “Did you have more trouble falling asleep than you usually do?” (yes / no)
8. “How often did that happen . . . every night, nearly every night, or less often?”
9. “Did you have a lot more trouble concentrating than usual?” (yes / no)
10. “At these times, people sometimes feel down on themselves, no good, or worthless. Did you feel this way?” (yes / no)
11. “Did you think a lot about death—either your own, someone else’s, or death in general?” (yes / no).

The second screening question for the depression module, “During the past 12 months, was there ever a time lasting two weeks or more when you lost interest in most things like hobbies, work, or activities that usually give you pleasure?” was asked of respondents who replied “no” to the first screening question or were “skipped out” of the subsequent questions based on their response to item 1 or 2.

Respondents who replied “yes” to the second screening question were asked the same follow-up questions (1 to 11) but with the difference that they were instructed to “think about the 2-week period during the past 12 months when



you had the most complete loss of interest in things.” As well, the wording for item 1 was revised to “During that two-week period, how long did the loss of interest usually last?”, and item 3 was not asked.

To derive a depression score, all respondents were assigned an initial value of 0. For each of the eight criteria listed below that was met, a value of 1 was added to the initial value; thus the total score could range from 0 to 8.

- a response of “yes” to either screening question
- a response of “yes” to item 3
- a response of “yes” to item 4
- a change of weight of at least 10 pounds (4.5 kilograms), indicated in item 6
- a response of “every night” or “nearly every night” to item 8
- a response of “yes” to item 9
- a response of “yes” to item 10
- a response of “yes” to item 11

The scores were transformed into a probability estimate of the occurrence of an MDE. For the analysis, if the estimate was 0.9 or more, that is, 90% likelihood of an MDE, the respondent was considered to have experienced a depressive episode in the previous 12 months. To obtain a probability of 0.9, respondents had to score 5 or more.

General health and mental health

The following two questions were asked about nurses’ perceptions of their health:

- “In general, would you say your health is ... excellent, very good, good, fair or poor?”
- “In general, would you say your mental health is ... excellent, very good, good, fair or poor?”

Estimates of the percentage of nurses reporting fair or poor general health and fair or poor mental health were compared with corresponding estimates for the employed population aged 21 or older (2005 CCHS data).



Medication use

Nurses were asked if they had taken the following medications in the past month:

- pain relievers such as aspirin or Tylenol (including arthritis medicine and anti-inflammatories)
- tranquilizers such as Valium or Ativan
- diet pills such as Dexatrim, Ponderal or Fastin
- antidepressants such as Prozac, Paxil or Effexor
- codeine, Demerol or morphine
- medicine for blood pressure
- diuretics or water pills
- sleeping pills such as Imovane, Nytol or Starnoc
- stomach remedies

Comparisons of the use of these medications between nurses and the employed population aged 21 or older were made using data from the 2003 CCHS.

From the medications included in the NSWHN, the total number of medications taken was calculated by summing the “yes” responses for each medication type. The average number of medications taken was calculated, as well as the percentage of nurses who reported taking three or more medications.

Difficulty handling workload

The frequency of **health-related work limitations** stemming from physical or mental health problems was assessed, based on the following questions:

- “In the past 4 weeks, how often did your **physical health** make it difficult for you to handle your workload as a nurse?”
- “In the past 4 weeks, how often did your **mental health** make it difficult for you to handle your workload as a nurse?”

The response categories were “none of the time,” “some of the time,” “half of the time,” “most of the time,” and “all of the time.” Nurses whose responses fell into any of the categories except “none of the time” were defined as having health-related work limitations.

Absences from work

To measure **health-related absences** from work in the past 12 months, respondents were instructed to report on absences from their main job, and to include absences due to work-related and non-work-related reasons.



The following questions were asked:

- “Did you miss work due to your own physical illness?”
- “Did you miss work due to your own mental health?”
- “How many work days did you miss due to a short-term illness, excluding injuries?”
- “How many work days did you miss due to a long-term illness, excluding injuries?”
- “Did you miss work due to an accident or injury to yourself?”
- “How many days did you miss due to the injury?”
- “Have you taken disability leave? How many days have you taken? Did you include these days with any other absences?”

The **total number of days missed due to health problems** in the past year was derived by summing days missed due to short-term illness, long-term illness, accidents or injuries, and disability leave (if the disability days had not been included in the reporting of other absences).

Chapter 6: Bringing it all together—Associations between nurses’ conditions of work and their health

For the analysis presented in this chapter, work-related factors were identified as either “tangible” or “psychosocial.”

Tangible factors comprised the following variables: usual shift worked, number of shift changes in past two weeks, having multiple jobs, hours worked per week, work setting and union coverage.

The following **psychosocial** factors were examined: work stress (job strain, supervisor support, co-worker support, job insecurity, physical demands); Nursing Work Index (autonomy, control over practice, nurse-physician relations); respect (from superiors, from co-workers); role overload.

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Appendix tables



Average age of nurses and average number of years worked in nursing, by selected characteristics, Canada, 2005

	Average age	Average number of years worked in nursing
Total nurses	44.3	18.3
Sex		
Female nurses	44.4*	18.4
All employed females (age 21+)	41.0	n/a
Male nurses	42.9*	15.0
All employed males (age 21+)	41.9	n/a
Type of nurse		
RN	44.3	18.7
LPN	44.0	16.5
RPN	46.4	19.7
Work setting		
Hospital	43.1	17.4
Long-term care facility	45.4	17.8
Community health setting	45.4	19.5
Other†	47.2	21.4
Province/Territory		
N.L.	42.8	17.7
P.E.I.	44.7	18.8
N.S.	44.6	19.2
N.B.	43.2	17.2
Que.	42.9	17.8
Ont.	44.8	18.4
Man.	44.5	18.4
Sask.	45.2	19.7
Alta.	44.3	18.1
B.C.	45.7	18.5
Y.T., N.W.T., Nvt.‡	43.9	17.9

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

‡ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

Light blue background: Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Green background: Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

n/a: not applicable.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Composition of nurses' households, by selected characteristics, Canada, 2005

	Couple with children	Couple, no children	Single parent	Lives alone	Other
	%	%	%	%	%
Total nurses	43.5	25.0	8.2	13.8	9.4
Sex					
Female nurses	43.5*	25.1	8.5*	13.5*	9.4*
All employed females (age 21+)	38.6	24.2	7.2	10.5	19.4
Male nurses	43.5	24.4	3.6* ^E	19.0*	9.5*
All employed males (age 21+)	42.3	23.8	1.7	10.5	21.7
Type of nurse					
RN	44.5	24.7	7.6	14.1	9.1
LPN	40.0	26.2	10.6	12.7	10.5
RPN	42.0	25.3	6.9	17.1	8.7
Age group					
Younger than 35	39.7	25.3	4.2	11.9	18.8
35 to 44	64.2	9.1	10.8	8.6	7.2
45 to 54	43.8	26.6	9.4	13.3	6.8
55 or older	15.0	46.5	6.3	25.3	6.8
Work setting					
Hospital	44.9	23.6	7.8	13.4	10.2
Long-term care facility	38.8	27.6	9.6	13.9	10.1
Community health setting	45.2	24.0	8.5	15.3	7.0
Other[†]	41.7	29.3	7.7	14.3	7.0
Province/Territory					
N.L.	52.0	24.0	7.3	9.4	7.4
P.E.I.	49.9	24.4	7.6	10.7	7.4
N.S.	45.1	25.0	6.9	11.2	11.7
N.B.	42.2	29.9	8.6	9.8	9.5
Que.	41.0	26.0	9.6	15.3	8.0
Ont.	46.0	22.2	8.7	13.0	10.1
Man.	45.1	25.5	6.4	14.2	8.7
Sask.	42.6	29.4	6.4	14.6	7.1
Alta.	43.1	28.3	5.8	14.6	8.2
B.C.	39.1	26.4	7.3	15.1	12.1
Y.T., N.W.T., Nvt.[‡]	31.9	29.0	6.9 ^E	20.9	11.2 ^E

[†] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[‡] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

Light blue background: Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Green background: Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.



Percentage of nurses with household income in the lowest/highest income quintiles†, by selected characteristics, Canada, 2005

	Lowest quintile	Highest quintile
	%	%
Total nurses	6.6	29.3
Sex		
Female nurses	6.7*	29.1*
All employed females (age 21+)	21.7	17.8
Male nurses	4.5* ^E	34.3*
All employed males (age 21+)	18.1	21.4
Type of nurse		
RN	4.2	33.6
LPN	16.1	11.7
RPN	2.9	39.3
Age group		
Younger than 35	8.9	23.2
35 to 44	8.2	23.0
45 to 54	4.7	36.1
55 or older	4.9	33.3
Work setting		
Hospital	5.1	29.3
Long-term care facility	11.9	20.5
Community health setting	6.6	31.4
Other‡	6.4	38.9
Province/Territory		
N.L.	3.5	32.1
P.E.I.	6.3	30.5
N.S.	5.1	35.8
N.B.	7.2	29.7
Que.	9.0	30.4
Ont.	6.0	24.6
Man.	4.6	39.0
Sask.	4.9	41.6
Alta.	7.6	32.4
B.C.	4.5	28.7
Y.T., N.W.T., Nvt.§	3.3 ^E	33.9

† Cut-points for quintiles were derived separately for each province and the territories using 2005 CCHS data, and were based on household income of the employed population aged 21 or older, adjusted for household size (see Definitions).

‡ Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

§ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p <0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p <0.05).

* Significantly different from estimate for All employed females/males (p <0.05).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey (CCHS), cycle 3.1.

Percentage of nurses who are overweight/obese, by selected characteristics, Canada, 2005

	Obese (BMI 30.0+)	Overweight/Obese (BMI 25.0+)
	%	%
Total nurses	14.4	45.0
Sex		
Female nurses	14.1	44.0*
All employed females (age 21+)	14.2	40.2
Male nurses	18.4	61.5
All employed males (age 21+)	18.0	60.8
Type of nurse		
RN	13.2	43.7
LPN	18.7	49.7
RPN	16.8	52.0
Age group		
Younger than 35	10.6	36.6
35 to 44	15.1	44.5
45 to 54	15.4	47.0
55 or older	15.2	50.7
Work setting		
Hospital	14.8	45.7
Long-term care facility	16.5	47.2
Community health setting	12.3	41.4
Other†	11.6	42.3
Province/Territory		
N.L.	20.2	54.9
P.E.I.	18.4	53.4
N.S.	17.3	51.9
N.B.	18.5	50.1
Que.	12.2	40.4
Ont.	14.6	46.7
Man.	17.3	49.9
Sask.	18.5	50.9
Alta.	15.3	44.6
B.C.	11.0	39.4
Y.T., N.W.T., Nvt.‡	17.1	49.2

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.



Percentage of nurses who smoke, by selected characteristics, Canada, 2005

	Daily smoker	Occasional/daily smoker
	%	%
Total nurses	10.8	16.1
Sex		
Female nurses	10.8*	15.8*
All employed females (age 21+)	17.2	23.0
Male nurses	11.4*	20.8*
All employed males (age 21+)	20.8	26.8
Type of nurse		
RN	8.7	13.6
LPN	19.0	25.4
RPN	15.9	22.3
Age group		
Younger than 35	10.9	16.4
35 to 44	11.5	17.2
45 to 54	11.1	16.1
55 or older	9.2	13.8
Work setting		
Hospital	10.6	15.6
Long-term care facility	15.5	20.6
Community health setting	8.8	14.2
Other†	7.8	14.1
Province/Territory		
N.L.	10.4	17.2
P.E.I.	10.1	15.2
N.S.	10.6	17.1
N.B.	11.5	17.1
Que.	12.9	18.9
Ont.	11.0	15.7
Man.	11.7	16.6
Sask.	12.8	18.7
Alta.	8.6	13.8
B.C.	6.8	11.0
Y.T., N.W.T., Nvt.‡	11.5	19.8

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

‡ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Percentage of nurses who reported consuming alcohol at least twice a week, by selected characteristics, Canada, 2005

Drinks at least twice a week	
	%
Total nurses	18.8
Sex	
Female nurses	18.3*
All employed females (age 21+)	23.4
Male nurses	27.6*
All employed males (age 21+)	41.3
Type of nurse	
RN	20.9
LPN	10.2
RPN	20.2
Age group	
Younger than 35	10.1
35 to 44	16.6
45 to 54	23.5
55 or older	23.1
Work setting	
Hospital	17.4
Long-term care facility	15.6
Community health setting	22.7
Other†	25.6
Province/Territory	
N.L.	10.1
P.E.I.	10.9
N.S.	14.5
N.B.	10.9
Que.	23.3
Ont.	17.7
Man.	16.0
Sask.	12.7
Alta.	15.0
B.C.	24.9
Y.T., N.W.T., Nvt.‡	25.1

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

‡ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.



Characteristics of main job,[†] by selected characteristics, Canada, 2005

	Permanent	Full-time	Full-time, but wants part-time	Part-time	Part-time, but wants full-time	Covered by union contract or collective agreement excluding self-employed
	%	%	%	%	%	%
Total nurses	84.2	61.2	21.7	38.8	23.2	81.7
Sex						
Female nurses	84.2*	60.2	22.4	39.8	22.9	81.2*
All employed females (age 21+)	77.4	n/a	n/a	n/a	n/a	33.6
Male nurses	83.7*	78.6	12.7	21.4	33.3	89.1*
All employed males (age 21+)	71.0	n/a	n/a	n/a	n/a	33.7
Type of nurse						
RN	85.2	62.2	22.3	37.8	17.9	80.5
LPN	80.0	56.4	19.2	43.6	42.3	85.5
RPN	87.1	71.0	20.4	29.0	11.5	90.1
Age group						
Younger than 35	78.0	60.0	21.6	40.0	39.3	85.9
35 to 44	84.9	58.3	24.2	41.7	25.8	82.8
45 to 54	90.0	66.6	20.9	33.4	19.6	81.5
55 or older	79.0	56.7	19.7	43.3	7.5	75.1
Work setting						
Hospital	87.3	62.0	21.7	38.0	21.3	90.4
Long-term care facility	83.8	54.2	22.2	45.8	35.5	78.7
Community health setting	78.9	62.6	23.5	37.4	17.3	73.3
Other [‡]	75.2	64.9	19.7	35.1	18.8	50.5
Province/Territory						
N.L.	77.7	78.3	15.9	21.7	32.2	92.0
P.E.I.	83.8	53.4	21.2	46.6	14.6	88.0
N.S.	86.3	65.5	21.0	34.5	20.4	82.6
N.B.	85.5	66.3	12.9	33.7	23.7	84.6
Que.	80.4	59.3	25.9	40.7	36.3	86.6
Ont.	87.9	65.9	18.0	34.1	22.8	73.2
Man.	87.8	50.2	19.5	49.8	13.3	88.0
Sask.	84.7	62.7	20.5	37.3	16.7	87.5
Alta.	82.3	46.7	30.9	53.3	11.7	82.7
B.C.	81.8	60.5	25.2	39.5	16.3	89.0
Y.T., N.W.T., Nvt. [§]	61.8	69.6	23.0	30.4	9.9 ^E	85.1

[†] The nursing job with the most weekly hours (see Definitions).

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

n/a: not available.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Labour Force Survey (October).

Hours worked at main job,[†] by selected characteristics, Canada, 2005

	Average usual paid hours per week excluding overtime	Paid overtime		Unpaid overtime		Employer expects overtime	Total hours	
		Usually works paid overtime	Average hours per week	Usually works unpaid overtime	Average hours per week		Average usual hours per week including overtime	paid and unpaid including self-employed
		including self-employed	excluding self-employed					
		%		%				
Total nurses	32.2	30.4	5.4	49.2	4.0	46.3		35.7
Sex								
Female nurses	32.0*	30.0*	5.3*	49.7*	4.0*	45.8		35.6
All employed females (age 21+)	33.9	13.3	3.3	26.1	6.1	n/a		35.7
Male nurses	34.7*	37.2*	6.5	41.2*	4.1*	54.7		38.8*
All employed males (age 21+)	40.8	27.7	5.8	29.9	8.9	n/a		44.1
Type of nurse								
RN	32.2	32.0	5.3	52.2	4.1	47.7		36.0
LPN	31.7	24.2	5.9	37.0	3.2	41.4		34.4
RPN	34.0	27.1	5.6	50.2	4.0	34.9		37.6
Age group								
Younger than 35	32.4	36.1	5.9	45.0	3.3	47.7		36.0
35 to 44	32.0	30.0	5.4	48.7	3.9	46.2		35.5
45 to 54	33.1	30.2	5.2	52.6	4.3	48.2		36.9
55 or older	30.5	24.4	4.9	48.4	4.3	40.7		33.5
Work setting								
Hospital	32.7	37.4	5.3	48.9	3.4	49.1		36.3
Long-term care facility	30.9	20.2	6.0	48.0	3.7	48.4		33.9
Community health setting	31.6	25.5	5.5	52.0	4.3	37.4		35.3
Other[‡]	31.8	14.8	5.5	49.4	7.0	38.4		36.0
Province/Territory								
N.L.	34.5	27.6	6.1	28.6	4.2	45.1		37.4
P.E.I.	31.5	25.1	4.2	44.1	3.7	34.9		34.2
N.S.	33.7	32.6	5.9	41.7	4.2	41.1		37.4
N.B.	33.8	36.6	5.1	36.3	3.6	43.0		37.0
Que.	31.1	31.3	6.0	48.9	4.1	61.1		34.9
Ont.	32.7	26.9	4.8	51.1	4.0	41.3		36.0
Man.	31.7	28.3	5.0	52.4	3.4	42.9		34.9
Sask.	32.5	32.1	5.3	50.9	3.6	39.1		36.0
Alta.	30.9	33.5	4.8	52.6	4.2	40.8		34.6
B.C.	32.3	34.3	5.9	50.3	4.0	42.3		36.3
Y.T., N.W.T., Nvt.[§]	37.6	57.1	13.2	49.1	4.8	47.1		47.8

[†] The nursing job with the most weekly hours (see Definitions).

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

* Significantly different from estimate for All employed females/males (p < 0.05).

n/a: not available.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Labour Force Survey (October, usual hours); 2003 Workplace and Employee Survey, employee file (overtime hours); 2005 Canadian Community Health Survey, cycle 3.1 (total hours).



Multiple job holding among nurses, by selected characteristics, Canada, 2005

	At least one other job	At least one other nursing job
	%	%
Total nurses	19.1	14.2
Sex		
Female nurses	18.9*	14.0
All employed females (age 21+)	9.3	n/a
Male nurses	23.3*	17.6
All employed males (age 21+)	8.7	n/a
Type of nurse		
RN	18.4	13.9
LPN	21.3	14.9
RPN	26.1	18.3
Age group		
Younger than 35	20.4	16.8
35 to 44	21.4	16.2
45 to 54	18.6	13.0
55 or older	15.2	10.3
Work setting		
Hospital	17.6	13.1
Long-term care facility	19.2	14.4
Community health setting	22.0	16.6
Other†	23.3	16.6
Province/Territory		
N.L.	9.2	5.9
P.E.I.	22.0	16.4
N.S.	14.7	11.2
N.B.	12.4	9.0
Que.	12.9	9.5
Ont.	20.4	15.1
Man.	23.3	16.6
Sask.	26.7	18.1
Alta.	23.4	15.3
B.C.	25.9	22.2
Y.T., N.W.T., Nvt.‡	35.4	28.5

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

‡ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

n/a: not applicable.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Nurses' total weekly hours at all jobs, by selected characteristics, Canada, 2005

	Average weekly hours at all jobs combined	Usually works more than 40 hours per week at all jobs combined
	includes nurses with one job	
		%
Total nurses	38.2	37.1
Sex		
Female nurses	37.9*	36.7*
All employed females (age 21+)	36.9	24.9
Male nurses	42.3*	44.2*
All employed males (age 21+)	45.5	51.1
Type of nurse		
RN	38.3	38.5
LPN	37.5	30.8
RPN	40.8	43.9
Age group		
Younger than 35	38.6	37.4
35 to 44	38.2	36.7
45 to 54	39.3	40.1
55 or older	35.4	31.6
Work setting		
Hospital	38.5	39.0
Long-term care facility	36.5	31.3
Community health setting	37.9	32.7
Other†	39.1	40.4
Province/Territory		
N.L.	38.7	31.4
P.E.I.	36.9	30.5
N.S.	39.3	41.8
N.B.	38.6	35.3
Que.	36.5	28.3
Ont.	38.6	40.8
Man.	37.7	36.9
Sask.	39.5	44.6
Alta.	37.4	37.6
B.C.	39.7	41.7
Y.T., N.W.T., Nvt.‡	56.2	69.4

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

‡ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

— Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

— Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.



Advance knowledge of weekly hours for main job[†] (excluding self-employed nurses), by selected characteristics, Canada, 2005

	Weekly hours known in advance			
	Always	Always or more than one month	One month or less	One week or less
	%	%	%	%
Total nurses	48.9	70.1	29.9	9.5
Sex				
Female nurses	49.1*	70.4*	29.6*	9.5*
All employed females (age 21+)	76.5	79.4	20.6	11.6
Male nurses	45.2*	65.8*	34.2*	9.0
All employed males (age 21+)	84.0	85.6	14.4	9.6
Type of nurse				
RN	49.6	71.6	28.4	8.0
LPN	44.3	63.2	36.8	15.8
RPN	68.4	83.9	16.1	6.1
Age group				
Younger than 35	40.1	61.0	39.0	14.2
35 to 44	46.2	69.9	30.1	8.7
45 to 54	54.9	75.6	24.4	6.8
55 or older	51.8	70.5	29.5	10.4
Work setting				
Hospital	42.3	69.8	30.2	8.3
Long-term care facility	50.5	64.6	35.4	13.4
Community health setting	61.9	72.1	27.9	11.1
Other [‡]	66.1	77.6	22.4	8.5
Province/Territory				
N.L.	41.9	71.5	28.5	13.8
P.E.I.	48.8	80.5	19.5	8.4
N.S.	45.6	73.1	26.9	7.5
N.B.	47.8	67.4	32.6	6.8
Que.	47.0	55.2	44.8	16.0
Ont.	40.7	70.1	29.9	6.9
Man.	56.4	78.7	21.3	7.2
Sask.	55.1	77.7	22.3	7.5
Alta.	57.6	84.1	15.9	6.4
B.C.	69.7	83.6	16.4	8.7
Y.T., N.W.T., Nvt. [§]	57.4	73.3	26.7	10.2 [‡]

[†] The nursing job with the most weekly hours (see Definitions).

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

Light blue: Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Dark blue: Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2003 Workplace and Employee Survey, employee file.

Usual type of shift and length of shift for main job,[†] by selected characteristics, Canada, 2005

	Days	Evenings	Nights	Mixed	Length of shift 12 or more hours [‡]
	%	%	%	%	%
Total nurses	46.0	7.5	8.2	38.4	27.3
Sex					
Female nurses	46.1	7.4	8.2	38.4	27.3
Male nurses	45.2	8.9	7.7 ^E	38.1	27.9
Type of nurse					
RN	48.5	6.2	8.1	37.1	28.8
LPN	35.8	12.3	8.5	43.3	22.1
RPN	46.6	6.8	5.9	40.8	17.5
Age group					
Younger than 35	31.0	9.8	11.2	48.0	36.0
35 to 44	44.8	6.0	8.6	40.6	30.4
45 to 54	52.3	7.0	6.8	33.8	24.2
55 or older	53.2	7.8	6.6	32.4	18.4
Work setting					
Hospital	35.3	6.6	10.2	47.9	41.1
Long-term care facility	37.4	16.9	10.5	35.2	10.8
Community health setting	80.7	2.4	1.7 ^E	15.3	2.8 ^E
Other [§]	73.1	4.1	2.0 ^E	20.8	7.2
Province/Territory					
N.L.	40.1	1.8 ^E	7.7	50.4	60.5
P.E.I.	33.1	2.9 ^E	6.1	57.9	34.7
N.S.	41.4	3.2	5.9	49.5	48.1
N.B.	40.7	3.8	5.9	49.7	38.0
Que.	53.9	16.1	12.0	18.1	3.0
Ont.	44.2	4.5	7.9	43.5	36.6
Man.	41.7	7.5	6.1	44.7	24.7
Sask.	43.3	3.1	7.7	45.8	46.2
Alta.	43.6	5.9	5.5	45.0	19.1
B.C.	43.9	5.0	6.0	45.1	38.3
Y.T., N.W.T., Nvt. ^{††}	60.7	F	F	36.3	33.1

[†] The nursing job with the most weekly hours (see Definitions).

[‡] Excludes nurses who work shifts of various hours' length (7% of nurses).

[§] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{††} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

^F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

Data source: 2005 National Survey of the Work and Health of Nurses.



Number of shift changes for main job[†] in past two weeks, by selected characteristics, Canada, 2005

	Number of shift changes			
	None	One or more	Two or more	Three or more
	%	%	%	%
Total nurses	66.4	33.6	22.9	11.1
Sex				
Female nurses	66.3	33.7	23.0	11.1
Male nurses	68.5	31.5	21.7	10.2
Type of nurse				
RN	67.6	32.4	21.8	10.5
LPN	61.7	38.3	27.4	13.3
RPN	66.1	33.9	22.8	10.2
Age group				
Younger than 35	55.2	44.8	32.8	15.5
35 to 44	63.6	36.4	24.2	12.0
45 to 54	70.9	29.1	19.2	9.9
55 or older	74.1	25.9	17.7	7.2
Work setting				
Hospital	58.4	41.6	28.5	13.6
Long-term care facility	65.7	34.3	24.1	12.0
Community health setting	85.2	14.8	9.1	4.2
Other [‡]	86.2	13.8	9.2	5.0
Province/Territory				
N.L.	63.6	36.4	25.2	15.2
P.E.I.	50.7	49.3	35.0	18.1
N.S.	62.6	37.4	27.3	13.8
N.B.	58.8	41.2	29.3	14.4
Que.	80.0	20.0	14.7	7.4
Ont.	61.6	38.4	25.2	12.4
Man.	64.1	35.9	22.9	10.5
Sask.	61.6	38.4	25.0	11.4
Alta.	63.2	36.8	22.8	10.1
B.C.	63.2	36.8	28.4	12.4
Y.T., N.W.T., Nvt. [§]	72.6	27.4	22.9	11.3

[†] The nursing job with the most weekly hours (see Definitions).

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

Light blue background: Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Green background: Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Percentage of nurses whose employer[†] offers flexibility in days and hours worked, by selected characteristics, Canada, 2005

	Flexible days	Flexible hours
	%	%
Total nurses	38.5	30.6
Sex		
Female nurses	38.8	30.9
Male nurses	32.5	26.2
Type of nurse		
RN	39.5	31.6
LPN	34.8	26.7
RPN	33.9	32.5
Age group		
Younger than 35	42.0	31.3
35 to 44	37.6	29.8
45 to 54	35.6	29.4
55 or older	41.1	33.6
Work setting		
Hospital	37.1	26.3
Long-term care facility	33.6	25.9
Community health setting	42.3	42.0
Other [‡]	48.0	47.5
Province/Territory		
N.L.	25.2	22.3
P.E.I.	32.4	26.7
N.S.	38.5	32.1
N.B.	34.8	32.0
Que.	36.3	28.6
Ont.	43.6	31.9
Man.	32.9	29.9
Sask.	39.0	32.9
Alta.	38.9	36.9
B.C.	32.3	26.0
Y.T., N.W.T., Nvt. [§]	36.4	27.4

[†] Based on the main job (the nursing job with the most weekly hours; see Definitions). Excludes self-employed.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.



**Employer-supported programs available at main job[†] (excluding self-employed nurses),
by selected characteristics, Canada, 2005**

	Employer offers				
	Help for childcare [‡]	Employee assistance [§]	Fitness and recreation services	Place to purchase healthy food	Place to purchase healthy food available during shifts worked
	%	%	%	%	%
Total nurses	11.6	79.2	33.9	51.4	39.2
Sex					
Female nurses	11.4*	78.9*	33.7*	51.4	39.2
All employed females (age 21+)	6.6	30.4	15.3	n/a	n/a
Male nurses	15.0*	83.1*	36.9*	51.8	39.4
All employed males (age 21+)	7.7	30.7	18.2	n/a	n/a
Type of nurse					
RN	12.7	81.0	35.8	52.0	40.0
LPN	7.5	71.0	26.0	49.2	36.5
RPN	7.7	88.8	36.3	49.3	36.0
Age group					
Younger than 35	11.7	74.0	34.5	55.8	39.5
35 to 44	11.1	80.3	34.7	53.5	39.8
45 to 54	11.9	82.6	34.0	49.3	39.2
55 or older	12.0	76.6	31.6	47.1	38.2
Work setting					
Hospital	15.2	86.1	41.0	63.7	46.6
Long-term care facility	6.7	65.3	20.3	44.7	36.1
Community health setting	3.5	77.9	20.4	16.3	14.1
Other ^{††}	9.7	65.3	31.5	35.5	33.0
Province/Territory					
N.L.	1.6 ^E	85.8	29.8	56.2	38.3
P.E.I.	1.7 ^E	75.9	39.7	71.4	54.1
N.S.	3.0	81.3	34.6	59.6	42.3
N.B.	9.6	83.2	40.3	61.6	47.3
Que.	25.6	76.4	31.1	46.9	40.8
Ont.	7.6	75.8	31.4	50.4	37.1
Man.	13.7	83.1	46.5	60.7	44.3
Sask.	9.7	87.6	47.4	63.9	44.8
Alta.	5.2	86.1	46.0	59.5	46.2
B.C.	6.0	81.8	25.7	42.0	28.8
Y.T., N.W.T., Nvt. ^{##}	F	87.6	25.9	36.6	25.8

[†] The nursing job with the most weekly hours (see Definitions).

[‡] On-site centre or assistance with external suppliers or informal arrangements.

[§] Counselling, substance abuse control, financial assistance, legal aid, etc.

^{††} Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{##} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

* Significantly different from estimate for All employed females/males.

E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

n/a: not available.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2003 Workplace and Employee Survey, employee file.

Percentage of nurses[†] reporting problems with quality of care delivered during last shift worked, by selected characteristics, Canada, 2005

	Staffing level inadequate	My nursing team [†] delivered fair or poor care	I delivered fair or poor care
	%	%	%
Total nurses	37.7	11.9	4.3
Sex			
Female nurses	37.7	11.7	4.2
Male nurses	39.1	14.9	6.1 ^E
Type of nurse			
RN	36.8	11.1	4.2
LPN	41.1	14.5	4.7
RPN	35.9	13.1	6.4
Age group			
Younger than 35	39.0	14.2	5.3
35 to 44	37.5	12.7	5.0
45 to 54	38.3	10.8	3.8
55 or older	35.4	9.5	3.0
Work setting			
Hospital	38.7	12.5	4.8
Long-term care facility	47.3	14.8	5.7
Community health setting	30.6	7.7	2.2 ^E
Other [§]	21.9	5.4 ^E	1.6 ^E
Last shift worked			
Day	37.0	11.3	4.0
Evening	41.2	13.4	5.9
Night	37.3	12.2	4.3
Province/Territory			
N.L.	36.6	9.4	3.6
P.E.I.	25.9	4.5 ^E	1.7 ^E
N.S.	30.8	7.7	3.4 ^E
N.B.	34.7	12.7	5.4
Que.	38.9	11.3	4.0
Ont.	38.8	11.9	3.7
Man.	31.1	12.3	4.2
Sask.	37.8	13.4	6.4
Alta.	36.5	10.8	2.9
B.C.	39.7	15.8	8.1
Y.T., N.W.T., Nvt. ^{**}	32.5	9.2 ^E	F

[†] Based on nurses who provide direct care.

[‡] Excludes nurses who did not work on a team.

[§] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{**} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

^F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

Data source: 2005 National Survey of the Work and Health of Nurses.



**Percentage of nurses† reporting changes in quality of care delivered at workplace
in the past 12 months, by selected characteristics, Canada, 2005**

	Quality of patient care		
	Improved	Remained the same	Deteriorated
	%	%	%
Total nurses	15.8	57.2	27.0
Sex			
Female nurses	15.8	57.2	27.0
Male nurses	15.3	58.9	25.9
Type of nurse			
RN	15.4	57.8	26.8
LPN	17.0	55.4	27.6
RPN	15.5	56.5	28.1
Age group			
Younger than 35	18.7	58.1	23.2
35 to 44	14.4	56.7	28.9
45 to 54	14.5	56.5	29.0
55 or older	16.8	58.5	24.7
Work setting			
Hospital	12.1	57.1	30.8
Long-term care facility	18.9	53.6	27.5
Community health setting	22.8	60.2	17.0
Other‡	26.2	61.1	12.8
Province/Territory			
N.L.	9.4	66.8	23.8
P.E.I.	16.2	69.1	14.7
N.S.	15.8	59.5	24.7
N.B.	12.4	62.6	24.9
Que.	16.6	56.7	26.7
Ont.	16.8	56.9	26.3
Man.	15.6	58.8	25.5
Sask.	11.8	59.3	28.9
Alta.	15.9	59.7	24.4
B.C.	14.4	50.3	35.2
Y.T., N.W.T., Nvt.§	19.1	61.0	19.9

† Based on nurses who provide direct care.

‡ Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

§ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.

Percentage of nurses[†] reporting adverse events in past 12 months, by selected characteristics, Canada, 2005

	Percentage reporting that event occurred occasionally or frequently				
	Patient received wrong medication or dose	Patient nosocomial infection	Complaints from patients or families	Patient injured in a fall	I was injured while working
	%	%	%	%	%
Total nurses	17.9	35.2	38.3	31.0	8.9
Sex					
Female nurses	17.8	35.3	38.1	30.9	8.9
Male nurses	19.2	33.8	41.7	32.7	8.8 ^E
Type of nurse					
RN	18.0	36.2	36.8	26.7	8.6
LPN	17.5	33.1	43.4	44.9	9.9
RPN	14.9	20.1	42.0	31.3	10.2
Age group					
Younger than 35	19.0	36.6	35.5	32.6	8.7
35 to 44	17.6	36.9	40.1	29.8	8.5
45 to 54	18.5	35.6	39.7	30.9	9.5
55 or older	15.6	29.2	36.5	30.8	8.8
Work setting					
Hospital	19.2	39.5	39.9	26.1	10.6
Long-term care facility	22.8	36.0	50.7	63.4	9.6
Community health setting	7.8	15.1	23.5	15.4	3.6
Other [‡]	9.3	17.9	23.2	17.4	2.8 ^E
Province/Territory					
N.L.	6.5	28.5	48.2	33.4	9.5
P.E.I.	12.6	30.3	39.0	33.6	5.5
N.S.	12.4	32.8	38.5	29.0	7.3
N.B.	14.9	29.5	39.7	32.9	9.3
Que.	27.5	41.7	32.5	36.6	6.9
Ont.	14.4	35.0	40.9	27.3	9.4
Man.	14.2	34.3	39.8	33.0	10.2
Sask.	16.0	30.2	40.2	31.7	10.9
Alta.	15.3	27.2	37.5	26.0	8.0
B.C.	17.5	35.2	39.7	34.0	12.3
Y.T., N.W.T., Nvt. [§]	12.5	18.3	32.3	15.4	6.3 ^E

[†] Based on nurses who provide direct care.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data source: 2005 National Survey of the Work and Health of Nurses.



Percentage of nurses[†] who sustained needlestick or other sharps injury involving object used on a patient, by selected characteristics, Canada, 2005

	Ever occurred	Occurred in past 12 months
	%	%
Total nurses	48.4	11.4
Sex		
Female nurses	48.5	11.4
Male nurses	47.1	10.7
Type of nurse		
RN	53.2	11.6
LPN	32.6	10.9
RPN	31.9	5.5
Age group		
Younger than 35	34.8	13.1
35 to 44	50.7	10.5
45 to 54	54.5	11.6
55 or older	50.2	10.0
Work setting		
Hospital	51.9	12.4
Long-term care facility	37.3	10.4
Community health setting	46.6	8.8
Other [‡]	47.0	9.3
Province/Territory		
N.L.	39.9	7.9
P.E.I.	43.1	7.5
N.S.	46.6	8.1
N.B.	44.0	7.7
Que.	58.1	15.2
Ont.	44.9	10.7
Man.	45.2	10.6
Sask.	44.3	10.2
Alta.	46.5	9.6
B.C.	46.4	10.7
Y.T., N.W.T., Nvt. [§]	45.2	9.8 ^E

[†] Based on nurses who provide direct care.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

Light blue shading: Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Green shading: Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data source: 2005 National Survey of the Work and Health of Nurses.

Percentage of nurses[†] whose job requires lifting or transferring patients, by selected characteristics, Canada, 2005

	Job requires lifting/transferring patients	Has access to mechanical lifting devices [‡]	Mechanical lifting devices not always available [§]
	%	%	%
Total nurses	77.1	69.0	33.2
Sex			
Female nurses	76.7	69.2	33.4
Male nurses	83.4	66.2	30.4
Type of nurse			
RN	75.5	62.9	35.8
LPN	84.4	87.9	27.8
RPN	50.4	73.9	29.4
Age group			
Younger than 35	83.1	71.8	39.0
35 to 44	77.8	69.4	35.3
45 to 54	76.4	66.5	29.5
55 or older	69.1	69.2	27.3
Work setting			
Hospital	87.4	65.4	35.5
Long-term care facility	84.5	95.4	25.9
Community health setting	38.6	49.1	48.1
Other ^{††}	42.4	46.7	28.4
Province/Territory			
N.L.	87.3	79.8	27.0
P.E.I.	80.2	80.9	23.0
N.S.	81.3	65.5	36.8
N.B.	77.6	71.7	29.5
Que.	76.5	66.7	33.6
Ont.	77.2	68.4	34.6
Man.	77.7	76.4	33.9
Sask.	77.5	81.0	28.8
Alta.	74.2	63.0	33.1
B.C.	75.7	72.5	32.3
Y.T., N.W.T., Nvt. ^{‡‡}	79.2	46.0	31.2

[†] Based on nurses who provide direct care.

[‡] Based on nurses whose job requires lifting/transferring patients.

[§] Based on nurses who use mechanical lifting devices.

^{††} Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{‡‡} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.



**Percentage of nurses[†] physically assaulted at work over past 12 months,
by selected characteristics, Canada, 2005**

	Physically assaulted by	
	A patient	Someone other than a patient while working
	%	%
Total nurses	28.8	2.2
Sex		
Female nurses	27.9	2.0
Male nurses	43.6	5.1 ^E
Type of nurse		
RN	25.4	2.3
LPN	40.1	2.0
RPN	37.7	2.6 ^E
Age group		
Younger than 35	35.5	2.0 ^E
35 to 44	29.7	2.3
45 to 54	27.1	2.8
55 or older	21.9	1.3 ^E
Work setting		
Hospital	29.6	2.6
Long-term care facility	49.6	1.7 ^E
Community health setting	9.3	1.7 ^E
Other [‡]	10.4	1.3 ^E
Province/Territory		
N.L.	36.2	1.3 ^E
P.E.I.	27.4	F
N.S.	32.2	2.0 ^E
N.B.	30.4	1.5 ^E
Que.	26.5	2.6 ^E
Ont.	28.4	2.0 ^E
Man.	32.9	1.3 ^E
Sask.	32.2	2.1 ^E
Alta.	25.3	2.4 ^E
B.C.	32.5	2.8 ^E
Y.T., N.W.T., Nvt. [§]	27.1	F

[†] Based on nurses who provide direct care.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

Light blue shading: Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Green shading: Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

Data source: 2005 National Survey of the Work and Health of Nurses.

Percentage of nurses[†] reporting emotional abuse at work over past 12 months, by selected characteristics, Canada, 2005

	Emotional abuse from				
	A patient	A visitor	A physician	A nurse co-worker	Someone else
	%	%	%	%	%
Total nurses	43.6	15.9	8.3	11.9	10.2
Sex					
Female nurses	43.0	15.8	8.3	11.7	10.2
Male nurses	54.3	17.6	7.8 ^E	14.8	11.2
Type of nurse					
RN	42.5	17.2	9.9	11.5	10.3
LPN	45.6	11.5	3.0	13.0	9.8
RPN	68.7	16.6	4.8	11.9	14.5
Age group					
Younger than 35	46.7	17.6	8.4	11.0	7.1
35 to 44	46.5	18.0	10.6	12.9	10.7
45 to 54	41.9	15.4	7.8	12.3	11.9
55 or older	38.2	11.4	5.3	10.6	10.2
Work setting					
Hospital	46.3	19.8	11.5	12.8	8.8
Long-term care facility	48.0	12.6	2.0 ^E	13.4	13.8
Community health setting	34.5	8.6	3.7	7.9	13.4
Other [‡]	29.0	5.3	3.9 ^E	8.0	9.8
Province/Territory					
N.L.	43.5	17.9	7.1	8.9	7.1
P.E.I.	43.8	14.8	6.4 ^E	9.7	6.8
N.S.	43.3	18.9	6.8	11.4	9.7
N.B.	41.7	10.9	7.3	9.5	9.6
Que.	35.3	9.9	7.3	13.5	11.6
Ont.	44.9	16.9	8.7	10.3	9.0
Man.	49.1	18.5	7.3	12.1	10.5
Sask.	51.6	21.2	10.5	12.2	11.9
Alta.	47.2	19.3	8.9	14.3	10.9
B.C.	50.0	20.8	9.7	12.4	11.1
Y.T., N.W.T., Nvt. [§]	58.6	16.3 ^E	6.1 ^E	15.5	12.5 ^E

[†] Based on nurses who provide direct care.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for the other categories of nurses in the group combined ($p < 0.05$).

■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution)

Data source: 2005 National Survey of the Work and Health of Nurses.



Percentage of nurses[†] concerned about risk of exposure to infectious diseases,
by selected characteristics, Canada, 2005

	Organization takes inadequate precautions to prevent spread of disease	Concerned about ability of organization to control an outbreak	Concerned about own risk of contracting a serious disease in workplace	Concerned about availability of personal protective equipment in an outbreak	Concerned about effectiveness of existing personal protective equipment in an outbreak	Average score [‡]
	%	%	%	%	%	
Total nurses	14.6	51.5	47.8	32.4	44.8	5.9
Sex						
Female nurses	14.3	51.0	47.2	32.1	44.7	5.8
Male nurses	21.3	60.1	57.5	37.2	46.7	6.7
Type of nurse						
RN	15.0	51.7	48.2	32.1	45.1	5.9
LPN	13.2	50.6	46.6	32.9	43.9	5.8
RPN	19.1	54.6	45.0	38.5	47.5	6.3
Age group						
Younger than 35	15.9	52.0	47.3	32.2	43.4	5.9
35 to 44	15.7	50.6	49.0	33.5	46.7	6.0
45 to 54	14.6	52.0	48.9	34.1	45.1	6.0
55 or older	11.3	51.3	44.1	27.4	43.1	5.5
Work setting						
Hospital	15.5	54.7	52.9	33.3	47.3	6.2
Long-term care facility	14.4	50.1	44.8	34.7	45.5	5.8
Community health setting	14.7	45.3	37.7	30.7	40.3	5.3
Other [§]	9.0	39.0	30.5	23.8	32.1	4.4
Province/Territory						
N.L.	13.2	59.9	54.7	36.6	50.3	6.6
P.E.I.	9.6	54.4	43.9	28.0	43.7	5.6
N.S.	10.7	51.8	45.9	32.7	45.2	5.8
N.B.	11.1	52.9	48.3	33.5	47.2	5.9
Que.	18.9	48.9	44.9	29.7	40.3	5.6
Ont.	12.9	49.2	48.8	31.2	45.2	5.8
Man.	13.1	56.7	47.2	35.3	46.2	6.2
Sask.	12.9	57.0	49.8	39.7	51.4	6.4
Alta.	11.8	51.5	44.7	32.9	43.9	5.9
B.C.	17.4	58.5	52.5	37.6	50.5	6.6
Y.T., N.W.T., Nvt. ^{††}	15.5	49.5	43.7	29.2	38.3	5.6

[†] Based on nurses who provide direct care.

[‡] Scores can range from 0 to 15, with higher scores indicating increased concerns about risk.

[§] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{††} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

Data source: 2005 National Survey of the Work and Health of Nurses.

Percentage of nurses reporting role overload, by selected characteristics, Canada, 2005

	Often arrive early or stay late to get work done	Often work through breaks to complete assigned work	Often too much work for one person	Not given enough time to do what is expected in job	Too much to do, to do everything well	Role overload score	
						Average score [†]	Percentage with high score [‡]
	%	%	%	%	%		%
Total nurses	54.2	62.1	66.9	45.0	57.2	12.1	27.8
Sex							
Female nurses	54.3	62.3	66.9	45.0	57.0	12.1	27.9
Male nurses	52.4	59.3	68.5	45.0	60.4	12.0	24.8
Type of nurse							
RN	56.2	64.0	66.9	45.1	57.6	12.3	29.0
LPN	47.5	55.3	67.8	45.3	56.1	11.6	23.5
RPN	41.8	53.9	59.0	36.6	47.7	10.7	18.9
Age group							
Younger than 35	54.8	63.5	67.0	43.3	54.9	12.1	25.5
35 to 44	54.9	62.4	66.6	43.6	58.2	12.1	27.7
45 to 54	55.1	63.8	69.3	48.2	60.2	12.4	31.0
55 or older	50.8	56.9	62.7	43.1	52.4	11.4	24.1
Work setting							
Hospital	55.3	64.4	70.3	46.4	61.7	12.5	28.8
Long-term care facility	55.9	61.4	73.1	51.7	62.4	12.5	31.5
Community health setting	50.7	63.4	58.9	41.2	49.2	11.4	24.2
Other [§]	50.4	51.3	51.0	33.4	37.1	10.2	21.1
Province/Territory							
N.L.	36.9	48.7	66.4	44.4	53.5	10.9	17.8
P.E.I.	46.4	49.3	58.4	35.8	47.0	10.7	17.6
N.S.	47.5	56.6	58.0	37.4	47.9	11.0	20.6
N.B.	49.8	57.8	67.6	45.1	57.3	11.8	23.4
Que.	59.1	64.7	69.7	48.3	62.0	12.7	33.6
Ont.	55.3	64.2	68.3	46.5	56.4	12.2	28.5
Man.	52.4	59.4	63.1	40.6	55.3	11.7	24.0
Sask.	53.1	64.6	68.4	44.6	58.8	12.2	25.1
Alta.	50.9	57.3	59.8	37.4	51.6	11.2	20.2
B.C.	52.3	61.3	67.6	45.4	59.0	12.1	28.5
Y.T., N.W.T., Nvt. ^{††}	54.8	63.3	58.8	40.9	47.6	11.4	23.4

[†] Scores can range from 0 to 20, with higher scores indicating higher role overload.

[‡] Defined as scores in the top quartile of the weighted distribution.

[§] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{††} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.



Percentage of nurses reporting work stress, by selected characteristics, Canada, 2005

	High job strain	Low co-worker support	Low supervisor support	Low job security	High physical demands
	%	%	%	%	%
Total nurses	30.7	45.3	25.1	10.4	62.4
Sex					
Female nurses	30.9*	44.9*	25.2*	10.5*	62.4*
All employed females (age 21+)	26.1	32.6	16.7	13.4	37.9
Male nurses	27.1*	51.3*	23.6*	8.7*	62.0*
All employed males (age 21+)	18.1	32.3	17.2	13.4	46.3
Type of nurse					
RN	30.1	45.5	25.3	9.2	59.5
LPN	32.8	43.7	24.5	15.0	75.0
RPN	31.6	52.7	25.1	11.7	45.3
Age group					
Younger than 35	27.4	44.2	23.5	11.0	72.8
35 to 44	32.4	47.0	25.5	11.2	64.9
45 to 54	33.1	47.9	26.7	10.0	58.2
55 or older	27.0	38.7	23.3	9.2	54.2
Work setting					
Hospital	33.2	46.8	27.5	8.0	74.3
Long-term care facility	37.6	51.7	24.8	13.7	66.4
Community health setting	20.1	38.3	21.1	14.1	34.8
Other†	20.4	36.4	17.7	13.6	28.7
Province/Territory					
N.L.	35.3	38.4	26.7	11.4	77.9
P.E.I.	29.7	40.7	19.0	11.9	66.3
N.S.	32.0	42.0	25.8	6.1	67.1
N.B.	33.3	47.7	27.4	9.3	69.9
Que.	24.3	48.0	23.2	12.5	50.9
Ont.	32.6	43.7	26.8	10.4	65.3
Man.	30.3	46.5	24.4	8.9	66.6
Sask.	37.3	45.8	28.7	8.9	68.9
Alta.	31.4	45.0	22.4	6.8	63.7
B.C.	33.9	46.4	24.7	11.3	65.7
Y.T., N.W.T., Nvt.‡	22.2	44.1	17.6	8.6 ^E	61.8

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

‡ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined (p <0.05).

* Significantly different from estimate for All employed females/males (p <0.05).

E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2002 Canadian Community Health Survey, cycle 1.2.



Percentage of nurses agreeing/disagreeing with work stress items, by sex, Canada, 2005

	Female nurses	All employed females (age 21 +)	Male nurses	All employed males (age 21 +)
	%	%	%	%
Job Strain				
Psychological demands				
Your job is very hectic—% agreeing	82.7	63.5	82.1	58.9
You are free from conflicting demands that others make—% disagreeing	53.6	44.0	52.8	41.6
Skill discretion				
Your job requires you to learn new things—% agreeing	91.4	81.7	92.6	82.8
Your job requires a high level of skill—% agreeing	92.4*	73.9	95.6	81.9
Your job requires that you do things over and over—% disagreeing	22.2	20.6	26.1	25.5
Decision authority				
You have the freedom to decide how to do your job—% agreeing	75.5	72.2	74.1	80.4
You have a lot to say about what happens in your job—% agreeing	68.7	61.9	68.3	71.6
Co-worker support				
You are exposed to hostility or conflict from the people you work with—% agreeing	43.6*	28.1	50.2	28.6
The people you work with are helpful in getting the job done—% disagreeing	4.5*	7.0	2.7 ^E	6.2
Supervisor support				
Your supervisor is helpful in getting the job done—% disagreeing	25.2	16.7	23.6	17.2
Job security				
Your job security is good—% disagreeing	10.5	13.4	8.7	13.4
Physical demands				
Your job requires a lot of physical effort—% agreeing	62.4	37.9	62.0	46.3

■ Significantly higher than estimate for All employed females/males (p < 0.05).

■ Significantly lower than estimate for All employed females/males (p < 0.05).

* Significantly different from estimate for males (p < 0.05).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2002 Canadian Community Health Survey, cycle 1.2.



Nursing Work Index: Autonomy,[†] by selected characteristics, Canada, 2005

	Percentage agreeing					Autonomy score	
	Supervisory staff is supportive	Nursing controls its own practice	Nurse makes important patient care and work decisions	Nurse does not have to do things against nursing judgment	Immediate supervisor backs up nursing staff in decision-making, even in conflicts with physicians	Average score [‡]	Percentage with low score [§]
	%	%	%	%	%	%	
Total nurses	73.5	75.5	84.9	81.7	72.9	10.4	25.1
Sex							
Female nurses	73.6	75.3	84.9	81.4	73.1	10.4	25.2
Male nurses	70.9	79.7	85.7	86.5	69.3	10.4	23.8
Type of nurse							
RN	73.2	75.8	86.3	81.6	73.1	10.4	24.7
LPN	74.3	74.8	79.7	82.3	72.3	10.2	26.6
RPN	74.5	71.3	85.6	79.4	73.9	10.2	28.5
Age group							
Younger than 35	74.7	78.9	87.1	82.3	75.5	10.6	22.2
35 to 44	73.0	73.9	84.7	80.7	71.1	10.2	27.0
45 to 54	71.6	74.4	83.3	81.3	72.2	10.3	26.3
55 or older	76.3	76.2	85.5	83.2	73.9	10.7	23.6
Work setting							
Hospital	70.0	72.9	84.2	80.1	70.8	10.1	28.5
Long-term care facility	73.4	75.2	80.7	81.8	72.4	10.3	25.5
Community health setting	82.2	83.9	92.3	85.4	80.2	11.4	15.0
Other ^{††}	88.3	84.0	88.0	88.4	82.9	11.8	12.8
Province/Territory							
N.L.	74.0	71.4	77.9	81.4	70.5	9.7	32.5
P.E.I.	83.2	70.4	84.3	84.2	77.4	10.5	23.5
N.S.	79.1	73.4	84.9	84.5	76.4	10.4	24.1
N.B.	76.7	70.6	84.9	82.7	73.6	10.3	25.8
Que.	64.6	79.8	82.6	84.5	70.6	10.7	22.3
Ont.	74.6	73.5	85.5	80.6	71.3	10.2	26.9
Man.	76.0	73.4	88.4	80.3	76.7	10.2	25.5
Sask.	75.6	72.0	86.5	77.7	74.1	10.0	29.2
Alta.	79.8	77.3	87.1	82.5	77.7	10.6	22.0
B.C.	78.0	76.4	85.7	78.7	75.4	10.4	25.6
Y.T., N.W.T., Nvt. ^{##}	77.8	78.1	91.2	78.3	81.3	11.1	19.6

[†] Based on nurses who are employees and provide direct care.

[‡] Scores can range from 0 to 15, with higher scores indicating more autonomy.

[§] In the bottom quartile of the weighted distribution.

^{††} Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{##} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

Data source: 2005 National Survey of the Work and Health of Nurses.

Nursing Work Index: Control over practice,[†] by selected characteristics, Canada, 2005

	Percentage agreeing							Control over practice score	
	Support services allow time for patients	Enough time and opportunity to discuss patient care	Enough nurses on staff to provide quality patient care	Immediate supervisor is a good manager and leader	Enough staff to get work done	Given opportunity to work in specialized care units	Given assignments that foster continuity of care	Average score [‡]	Percentage with low score [§]
	%	%	%	%	%	%	%	%	
Total nurses	56.8	60.4	47.8	73.6	51.7	73.0	76.7	12.0	23.9
Sex									
Female nurses	56.7	60.3	47.9	73.6	51.8	72.8	77.0	12.0	23.7
Male nurses	57.8	61.2	46.7	73.4	50.4	76.7	71.3	11.9	27.1
Type of nurse									
RN	58.0	59.9	48.5	72.4	52.0	78.4	75.9	12.1	22.8
LPN	52.0	61.2	44.9	77.8	50.1	52.1	78.6	11.7	28.0
RPN	63.9	70.3	57.0	70.9	61.5	72.7	81.6	13.0	18.2
Age group									
Younger than 35	56.2	60.2	47.0	75.5	50.0	70.5	73.8	12.0	21.8
35 to 44	56.5	61.0	46.3	73.6	50.7	75.1	74.2	11.9	24.3
45 to 54	56.1	59.0	47.0	72.5	51.5	73.2	79.5	12.0	25.1
55 or older	59.3	62.4	53.3	72.9	56.3	72.8	79.7	12.4	23.7
Work setting									
Hospital	54.8	58.1	44.2	71.1	49.0	80.6	72.4	11.7	24.9
Long-term care facility	46.6	55.4	43.8	75.0	45.6	44.8	85.3	11.4	29.0
Community health setting	70.5	69.7	58.5	79.4	61.5	50.9	81.6	13.2	17.1
Other ^{††}	75.6	75.2	70.3	82.8	71.1	58.3	81.8	14.3	13.7
Province/Territory									
N.L.	52.3	66.5	49.0	74.4	51.9	65.6	68.7	11.6	26.6
P.E.I.	64.7	73.8	64.0	82.0	69.9	64.5	76.1	13.3	12.4
N.S.	60.4	66.0	54.2	76.9	62.5	71.2	73.2	12.6	19.7
N.B.	56.1	62.5	47.8	75.0	53.8	72.0	71.3	12.0	21.5
Que.	47.7	42.5	38.5	72.8	41.3	64.7	74.2	11.2	31.2
Ont.	60.4	66.7	48.9	72.6	53.8	76.5	77.2	12.2	22.2
Man.	61.6	67.4	54.8	74.9	57.5	72.9	80.7	12.5	19.0
Sask.	57.9	64.6	51.2	69.8	57.5	75.2	77.6	12.2	20.8
Alta.	62.8	66.9	57.6	78.1	59.9	79.4	81.1	12.9	18.3
B.C.	56.4	64.2	48.7	72.3	50.8	77.6	79.4	12.2	23.5
Y.T., N.W.T., Nvt. ^{‡‡}	64.7	79.7	60.8	78.6	59.8	66.8	84.7	13.3	16.0

[†] Based on nurses who are employees and provide direct care.

[‡] Scores can range from 0 to 21, with higher scores indicating more control over practice.

[§] In the bottom quartile of the weighted distribution.

^{††} Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{‡‡} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

Data source: 2005 National Survey of the Work and Health of Nurses.



Nursing Work Index: Working relations between nurses[†] and physicians, by selected characteristics, Canada, 2005

	Percentage agreeing			Nurse/physician working relations score	
	Physicians and nurses have good working relations	There is a lot of team work between nurses and physicians	There is collaboration between nurses and physicians	Average score [‡]	Percentage with low score [§]
	%	%	%		%
Total nurses	87.3	80.9	89.0	6.6	21.6
Sex					
Female nurses	87.3	80.9	89.0	6.6	21.7
Male nurses	87.7	82.3	88.1	6.7	20.3
Type of nurse					
RN	87.7	81.6	89.1	6.7	21.1
LPN	85.9	78.5	88.2	6.5	23.5
RPN	88.2	81.4	91.3	6.7	20.3
Age group					
Younger than 35	86.0	81.1	89.0	6.6	22.6
35 to 44	86.6	79.6	88.4	6.6	22.7
45 to 54	87.0	79.9	88.0	6.6	22.4
55 or older	91.0	85.2	92.0	7.0	16.6
Work setting					
Hospital	86.5	81.3	88.6	6.6	22.3
Long-term care facility	88.1	79.1	89.2	6.7	21.7
Community health setting	87.8	77.3	88.2	6.6	22.6
Other ^{††}	91.4	87.3	92.9	7.3	14.4
Province/Territory					
N.L.	89.5	84.2	91.8	6.5	19.0
P.E.I.	89.0	81.0	90.2	6.5	21.0
N.S.	87.1	80.7	89.4	6.5	22.6
N.B.	88.6	80.1	89.6	6.6	22.2
Que.	83.8	75.2	85.9	6.7	26.3
Ont.	87.2	82.2	89.4	6.6	21.0
Man.	89.6	82.4	91.4	6.6	20.4
Sask.	87.9	82.0	88.7	6.5	20.9
Alta.	90.7	84.3	91.2	6.8	18.1
B.C.	90.3	84.6	90.4	6.7	17.7
Y.T., N.W.T., Nvt. ^{‡‡}	94.0	90.7	93.7	7.2	9.8 ^E

[†] Based on nurses who are employees and provide direct care.

[‡] Scores can range from 0 to 9, with higher scores indicating better relations between nurses and physicians.

[§] In the bottom quartile of the weighted distribution.

^{††} Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{‡‡} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data source: 2005 National Survey of the Work and Health of Nurses.

Percentage of nurses[†] reporting lack of respect, by selected characteristics, Canada, 2005

	Lack of respect from superiors	Lack of respect from colleagues	Lack of respect and prestige considering efforts and achievements
	%	%	%
Total nurses	18.1	5.2	17.2
Sex			
Female nurses	18.0	5.2	17.2
Male nurses	20.3	4.3 ^E	17.4
Type of nurse			
RN	17.6	4.5	16.7
LPN	19.7	7.7	19.2
RPN	21.6	4.7	15.6
Age group			
Younger than 35	15.6	4.9	15.8
35 to 44	18.9	5.2	18.7
45 to 54	19.3	5.7	17.6
55 or older	17.6	4.6	16.0
Work setting			
Hospital	19.3	4.7	18.4
Long-term care facility	20.3	8.8	19.4
Community health setting	13.8	4.0 ^E	12.3
Other [‡]	10.8	3.6 ^E	11.0
Province/Territory			
N.L.	23.0	4.9	19.4
P.E.I.	13.6	3.6 ^E	10.7
N.S.	19.2	6.0	17.7
N.B.	18.8	6.2	16.7
Que.	17.5	6.8	18.8
Ont.	19.1	4.7	18.1
Man.	17.2	4.1	14.0
Sask.	19.2	5.4	15.2
Alta.	14.1	3.6	12.9
B.C.	18.6	4.4	17.1
Y.T., N.W.T., Nvt. [§]	17.2	5.5 ^E	9.7 ^E

[†] Based on nurses who are employees and provide direct care.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data source: 2005 National Survey of the Work and Health of Nurses.



Percentage of nurses reporting job dissatisfaction, by selected characteristics, Canada, 2005

	Dissatisfied with job	Dissatisfied with being a nurse
	%	%
Total nurses	11.8	9.7
Sex		
Female nurses	11.8*	9.6
All employed females (age 21+)	8.5	n/a
Male nurses	11.7*	11.0
All employed males (age 21+)	8.0	n/a
Type of nurse		
RN	11.3	10.0
LPN	13.8	8.5
RPN	11.6	7.6
Age group		
Younger than 35	9.7	6.5
35 to 44	12.0	10.5
45 to 54	12.8	10.8
55 or older	12.2	10.1
Work setting		
Hospital	12.9	9.9
Long-term care facility	14.7	9.1
Community health setting	7.8	9.6
Other†	7.0	9.7
Province/Territory		
N.L.	9.5	5.1
P.E.I.	6.1	5.3
N.S.	8.7	7.6
N.B.	9.1	5.9
Que.	13.4	10.9
Ont.	12.5	10.1
Man.	9.2	8.6
Sask.	12.2	9.2
Alta.	8.4	7.7
B.C.	13.2	11.3
Y.T., N.W.T., Nvt.‡	7.0 ^E	6.8 ^E

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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■ Significantly lower than estimate for the other categories of nurses in the group combined (p <0.05).

* Significantly different from estimate for All employed females/males (p <0.05).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

n/a: not applicable.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2002 Canadian Community Health Survey, cycle 1.2.

Percentage of nurses reporting musculoskeletal conditions, by selected characteristics, Canada, 2005

	Arthritis	Back problems	At least one musculoskeletal condition
	%	%	%
Total nurses	15.2	25.1	33.5
Sex			
Female nurses	15.5*	25.2*	33.8*
All employed females (age 21+)	13.4	18.8	27.2
Male nurses	10.0	23.5	28.4
All employed males (age 21+)	9.5	19.2	25.2
Type of nurse			
RN	14.5	24.6	32.7
LPN	17.5	27.0	36.2
RPN	21.2	27.7	39.3
Age group			
Younger than 35	3.0	17.7	19.4
35 to 44	7.9	23.8	27.9
45 to 54	19.8	28.7	39.4
55 or older	32.1	28.7	47.2
Work setting			
Hospital	14.1	26.5	34.0
Long-term care facility	17.3	23.5	33.6
Community health setting	15.9	22.8	32.0
Other†	17.2	22.9	32.8
Province/Territory			
N.L.	16.8	28.7	37.8
P.E.I.	17.0	24.9	35.0
N.S.	19.0	27.5	37.1
N.B.	14.8	24.7	33.9
Que.	8.9	20.3	25.9
Ont.	17.4	26.1	35.2
Man.	20.3	27.5	38.8
Sask.	20.0	30.1	40.6
Alta.	16.9	24.4	34.6
B.C.	15.5	29.2	37.1
Y.T., N.W.T., Nvt.‡	12.9	23.9	31.8

† Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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* Significantly different from estimate for All employed females/males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.



Percentage of nurses reporting allergies or asthma, by selected characteristics, Canada, 2005

	Allergies	Asthma	Allergies or asthma
	%	%	%
Total nurses	31.2	10.2	33.6
Sex			
Female nurses	31.8*	10.3*	34.1*
All employed females (age 21+)	35.8	9.4	38.4
Male nurses	22.0	8.0 ^E	25.0
All employed males (age 21+)	25.8	5.8	27.8
Type of nurse			
RN	31.5	10.4	33.9
LPN	30.0	9.3	32.4
RPN	32.4	8.6	34.3
Age group			
Younger than 35	32.0	12.2	35.0
35 to 44	32.3	10.6	34.4
45 to 54	30.1	9.8	32.5
55 or older	30.9	7.9	32.9
Work setting			
Hospital	31.8	10.2	34.0
Long-term care facility	30.0	9.7	32.9
Community health setting	30.0	10.9	33.0
Other [†]	31.6	10.1	33.5
Province/Territory			
N.L.	27.2	9.1	29.4
P.E.I.	28.5	10.2	31.1
N.S.	28.6	9.8	31.4
N.B.	29.8	9.4	31.9
Que.	27.4	9.6	30.0
Ont.	34.5	11.0	36.9
Man.	33.6	9.8	36.0
Sask.	32.5	9.2	34.3
Alta.	30.4	10.4	32.4
B.C.	31.2	9.6	33.5
Y.T., N.W.T., Nvt. [‡]	26.3	9.2 ^E	27.9

[†] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Percentage of nurses reporting other chronic conditions, by selected characteristics, Canada, 2005

	Migraine	Cancer	Stomach or intestinal ulcers	Sleep disorder	Bowel disorder	Thyroid condition
	%	%	%	%	%	%
Total nurses	17.7	1.8	3.6	8.4	4.7	9.6
Sex						
Female nurses	18.3*	1.8*	3.6*	8.3	4.7*	10.1*
All employed females (age 21+)	17.1	0.7	2.8	n/a	5.4	7.8
Male nurses	7.6	F	3.9 ^E	10.2	4.7* ^E	2.1 ^E
All employed males (age 21+)	6.5	0.7	2.8	n/a	2.3	1.7
Type of nurse						
RN	17.6	1.9	3.3	8.0	4.4	9.6
LPN	18.6	1.6	4.6	9.6	5.6	10.1
RPN	16.3	1.7 ^E	3.0	8.8	4.7	7.0
Age group						
Younger than 35	17.7	0.3 ^E	2.4 ^E	4.2	3.6	4.9
35 to 44	19.3	0.6 ^E	3.5	6.9	4.4	8.7
45 to 54	20.0	2.6	4.6	11.5	5.2	11.0
55 or older	10.9	3.8	3.1	9.5	5.1	13.9
Work setting						
Hospital	18.1	1.7	3.5	8.2	4.5	8.9
Long-term care facility	19.2	1.9 ^E	4.2	9.9	5.2	10.5
Community health setting	15.6	1.7 ^E	4.2	7.2	5.2	10.5
Other[†]	16.3	2.3 ^E	2.6 ^E	8.3	4.5	11.0
Province/Territory						
N.L.	17.5	1.4 ^E	3.4	2.8	6.2	9.4
P.E.I.	16.8	1.6 ^E	3.9 ^E	5.4	6.8	12.6
N.S.	18.6	1.8 ^E	5.2 ^E	5.5 ^E	5.1	12.3
N.B.	17.8	1.4 ^E	3.3	7.7	5.6	8.7
Que.	15.8	1.2 ^E	3.2	12.2	3.1	9.5
Ont.	20.0	2.0 ^E	3.7	7.3	5.4	9.7
Man.	17.9	1.7 ^E	4.2	7.7	4.3	10.0
Sask.	18.6	1.7 ^E	3.9	7.6	7.0	9.5
Alta.	17.2	2.2 ^E	3.4	6.5	5.3	11.3
B.C.	15.0	2.2 ^E	3.4	8.2	3.5	7.4
Y.T., N.W.T., Nvt.[‡]	9.7 ^E	F	4.9 ^E	4.5 ^E	3.9 ^E	8.4 ^E

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* Significantly different from estimate for All employed females/males (p < 0.05).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

^F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

n/a: not available.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.



**Percentage of nurses reporting cardiovascular and related conditions,
by selected characteristics, Canada, 2005**

	High blood pressure	High cholesterol levels	Diabetes	Heart disease	At least one cardiovascular and related condition (excluding high cholesterol levels)
	%	%	%	%	%
Total nurses	13.2	10.1	3.2	2.1	16.2
Sex					
Female nurses	13.0*	9.5	3.1*	2.0*	16.0*
All employed females (age 21+)	9.4	n/a	2.4	1.4	11.7
Male nurses	17.0*	19.1	4.2 ^E	3.1 ^E	20.2*
All employed males (age 21+)	11.6	n/a	3.8	2.8	15.3
Type of nurse					
RN	12.8	9.8	3.0	1.9	15.6
LPN	15.0	10.9	4.0	2.8	18.7
RPN	14.1	12.4	4.6	2.4	17.7
Age group					
Younger than 35	2.3	2.9	1.7 ^E	0.7 ^E	4.4
35 to 44	7.0	5.5	1.4	1.4 ^E	9.2
45 to 54	16.7	12.6	4.1	2.5	20.1
55 or older	29.1	20.6	5.9	4.1	33.5
Work setting					
Hospital	12.3	9.0	3.1	1.9	15.1
Long-term care facility	16.1	12.5	4.0	3.5	20.3
Community health setting	12.5	9.8	2.5	1.5 ^E	14.8
Other [†]	14.7	12.2	3.3 ^E	1.8 ^E	17.4
Province/Territory					
N.L.	12.6	10.5	3.9	1.5 ^E	15.6
P.E.I.	16.5	10.9	3.2 ^E	3.0 ^E	20.5
N.S.	13.1	10.5	2.8 ^E	1.6 ^E	15.6
N.B.	15.1	12.6	2.6 ^E	1.9 ^E	17.7
Que.	11.7	9.1	2.2	2.3	14.6
Ont.	14.1	9.9	3.9	2.3	17.5
Man.	12.4	10.8	3.7	1.8 ^E	15.8
Sask.	15.1	12.9	3.5	2.1 ^E	18.0
Alta.	13.4	10.2	2.5	1.8 ^E	15.4
B.C.	12.9	10.4	3.7	1.7 ^E	15.9
Y.T., N.W.T., Nvt. [‡]	9.7 ^E	8.6 ^E	F	F	12.8 ^E

[†] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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* Significantly different from estimate for All employed females/males (p <0.05).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

^F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

n/a: not available.

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.

Percentage of nurses reporting conditions featuring medically unexplained physical symptoms (MUPS), by selected characteristics, Canada, 2005

	Fibromyalgia	Chronic fatigue syndrome	Multiple chemical sensitivities	At least one MUPS condition
	%	%	%	%
Total nurses	1.9	1.4	3.6	6.4
Sex				
Female nurses	2.0	1.5*	3.8*	6.6*
All employed females (age 21+)	1.8	1.1	3.0	5.2
Male nurses	F	F	F	2.4 ^E
All employed males (age 21+)	0.4	0.5	1.2	2.0
Type of nurse				
RN	1.7	1.4	3.5	6.1
LPN	2.5	1.7	4.2	7.5
RPN	2.4 ^E	1.8 ^E	4.5	7.9
Age group				
Younger than 35	F	0.9 ^E	1.4 ^E	2.4
35 to 44	1.8	1.4 ^E	3.7	6.5
45 to 54	2.8	1.7	4.3	7.7
55 or older	2.2	1.6 ^E	4.8	8.1
Work setting				
Hospital	1.4	1.4	3.7	6.1
Long-term care facility	2.3	2.0	3.9	7.2
Community health setting	2.2 ^E	1.1 ^E	3.1	5.9
Other [†]	3.3	1.4 ^E	3.4	7.0
Province/Territory				
N.L.	1.8 ^E	0.8 ^E	5.9	7.7
P.E.I.	2.8 ^E	F	3.8 ^E	6.1 ^E
N.S.	3.3	1.4 ^E	5.4	8.5
N.B.	3.0	1.3 ^E	4.0	7.2
Que.	1.4 ^E	1.8 ^E	1.0 ^E	3.8
Ont.	1.8	1.4 ^E	3.7	6.3
Man.	2.5 ^E	1.0 ^E	5.3	8.5
Sask.	3.4	1.2 ^E	6.2	9.8
Alta.	1.7 ^E	1.5 ^E	4.5	7.2
B.C.	2.1 ^E	1.2 ^E	5.9	8.4
Y.T., N.W.T., Nvt. [‡]	F	F	3.7 ^E	4.5 ^E

[†] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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* Significantly different from estimate for All employed females/males ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

^F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.



Average number of chronic conditions[†] among nurses, and percentage of nurses reporting three or more chronic conditions, by selected characteristics, Canada, 2005

	Average number of chronic conditions	Three or more chronic conditions %
Total nurses	1.4	20.5
Sex		
Female nurses	1.5*	20.9*
All employed females (age 21+)	1.3	16.7
Male nurses	1.1*	13.0*
All employed males (age 21+)	0.9	9.0
Type of nurse		
RN	1.4	20.0
LPN	1.5	22.2
RPN	1.5	22.0
Age group		
Younger than 35	1.0	10.5
35 to 44	1.3	17.3
45 to 54	1.6	24.2
55 or older	1.8	29.8
Work setting		
Hospital	1.4	20.0
Long-term care facility	1.5	21.7
Community health setting	1.4	20.0
Other [‡]	1.5	21.5
Province/Territory		
N.L.	1.5	20.8
P.E.I.	1.5	21.5
N.S.	1.6	22.4
N.B.	1.4	19.1
Que.	1.2	14.7
Ont.	1.6	23.7
Man.	1.6	23.3
Sask.	1.6	25.7
Alta.	1.5	19.7
B.C.	1.4	20.1
Y.T., N.W.T., Nvt. [§]	1.2	16.3

[†] Allergies, asthma, fibromyalgia, chronic fatigue syndrome, multiple chemical sensitivities, arthritis, back problems, high blood pressure, diabetes, heart disease, migraine, cancer, stomach or intestinal ulcers, bowel disorder and thyroid condition (excludes high cholesterol levels and sleep disorders, since these conditions were not asked on the CCHS).

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey (CCHS), cycle 3.1.

Percentage of nurses reporting pain, by selected characteristics, Canada, 2005

	Pain in past 12 months that affected normal activities	Pain in past 12 months that was severe/unbearable	Pain in past 6 months that affected ability to do nursing job
	%	%	%
Total nurses	37.2	13.4	23.6
Sex			
Female nurses	37.4	13.4	23.7
Male nurses	32.4	12.0	21.3
Type of nurse			
RN	37.0	12.4	22.9
LPN	37.6	17.0	26.1
RPN	39.4	15.6	26.1
Age group			
Younger than 35	36.8	10.2	24.1
35 to 44	38.0	12.7	23.4
45 to 54	39.3	15.6	25.1
55 or older	32.2	13.7	20.5
Work setting			
Hospital	39.1	13.3	25.1
Long-term care facility	37.5	16.2	25.5
Community health setting	34.1	11.5	19.9
Other [†]	30.9	11.9	17.8
Province/Territory			
N.L.	45.0	16.7	31.1
P.E.I.	35.4	11.1	21.5
N.S.	38.4	12.8	24.2
N.B.	39.6	15.3	26.5
Que.	33.3	14.8	20.4
Ont.	36.3	13.2	23.3
Man.	41.3	13.0	27.7
Sask.	42.5	13.5	26.9
Alta.	38.0	11.3	24.5
B.C.	41.5	12.0	26.1
Y.T., N.W.T., Nvt. [‡]	33.9	9.8 ^E	15.4

[†] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[‡] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data source: 2005 National Survey of the Work and Health of Nurses.



**Percentage of nurses experiencing depression in past 12 months,
by selected characteristics, Canada, 2005**

Depression in past 12 months	
	%
Total nurses	9.4
Sex	
Female nurses	9.4*
All employed females (age 21+) [†]	7.0
Male nurses	9.3*
All employed males (age 21+) [†]	3.7
Type of nurse	
RN	9.2
LPN	9.7
RPN	9.6
Age group	
Younger than 35	9.1
35 to 44	10.8
45 to 54	9.5
55 or older	7.1
Work setting	
Hospital	8.9
Long-term care facility	10.6
Community health setting	10.6
Other [‡]	8.5
Province/Territory	
N.L.	5.3
P.E.I.	5.7
N.S.	9.0
N.B.	8.6
Que.	10.7
Ont.	9.0
Man.	9.1
Sask.	8.4
Alta.	10.3
B.C.	8.7
Y.T., N.W.T., Nvt. [§]	7.1 ^E

[†] The 2005 CCHS measured depression in the provinces of Prince Edward Island, Nova Scotia, Quebec, Saskatchewan, Alberta, and British Columbia.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

Light blue background: Significantly higher than estimate for the other categories of nurses in the group combined (p < 0.05).

Green background: Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

* Significantly different from estimate for All employed females/males (p < 0.05).

E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey (CCHS), cycle 3.1.

Percentage of nurses reporting fair/poor general health and fair/poor mental health, by selected characteristics, Canada, 2005

	Fair/poor general health	Fair/poor mental health
	%	%
Total nurses	6.6	5.5
Sex		
Female nurses	6.7	5.5*
All employed females (age 21+)	6.1	4.0
Male nurses	5.4 ^E	5.6* ^E
All employed males (age 21+)	6.6	3.5
Type of nurse		
RN	6.3	5.4
LPN	7.6	5.9
RPN	9.0	6.0
Age group		
Younger than 35	3.4	5.3
35 to 44	7.1	6.7
45 to 54	7.5	5.7
55 or older	7.7	3.7
Work setting		
Hospital	6.4	5.5
Long-term care facility	8.5	6.8
Community health setting	5.8	5.7
Other[†]	5.8	3.8
Province/Territory		
N.L.	5.8	2.7
P.E.I.	4.5 ^E	3.5 ^E
N.S.	6.7	3.1
N.B.	6.7	5.1
Que.	5.4	5.0
Ont.	7.4	6.5
Man.	6.9	6.0
Sask.	7.6	6.2
Alta.	5.3	4.6
B.C.	7.5	5.7
Y.T., N.W.T., Nvt.[‡]	5.1 ^E	3.9 ^E

[†] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

* Significantly different from estimate for All employed females/males ($p < 0.05$).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2005 Canadian Community Health Survey, cycle 3.1.



Percentage of nurses reporting taking selected types of medication in past month, by selected characteristics, Canada, 2005

	Tranquilizers	Antidepressants	Codeine, Demerol or morphine	Sleeping pills
	%	%	%	%
Total nurses	4.1	9.2	7.4	8.5
Sex				
Female nurses	4.0	9.4*	7.3	8.5*
All employed females (age 21+)	3.4	7.4	7.7	4.2
Male nurses	5.9* ^E	6.0* ^E	8.0	8.2* ^E
All employed males (age 21+)	1.5	3.1	5.7	2.4
Type of nurse				
RN	3.9	9.1	7.2	8.4
LPN	4.9	9.5	8.0	8.2
RPN	4.5	11.5	10.2	12.9
Age group				
Younger than 35	2.9	5.4	8.2	6.1
35 to 44	3.9	9.8	8.1	8.3
45 to 54	4.7	11.1	7.1	10.4
55 or older	4.5	9.1	5.9	7.7
Work setting				
Hospital	4.1	8.6	7.0	8.9
Long-term care facility	4.8	10.1	8.1	8.1
Community health setting	3.4 ^E	10.7	8.3	7.9
Other [†]	3.5	9.2	7.3	7.5
Province/Territory				
N.L.	2.5 ^E	4.8	8.0	3.3
P.E.I.	4.4	7.0	7.3	8.0
N.S.	3.7	10.1	7.6	5.9
N.B.	3.9	8.5	7.1	9.2
Que.	4.5	9.4	4.9	7.2
Ont.	3.8	8.3	7.3	7.6
Man.	4.6	9.7	10.5	10.0
Sask.	3.3	9.6	8.3	8.5
Alta.	4.7	10.6	9.7	10.8
B.C.	3.9	11.3	9.1	13.2
Y.T., N.W.T., Nvt. [‡]	3.2 ^E	7.6 ^E	10.0 ^E	7.4 ^E

[†] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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■ Significantly lower than estimate for the other categories of nurses in the group combined (p <0.05).

* Significantly different from estimate for All employed females/males (p <0.05).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2003 Canadian Community Health Survey, cycle 2.1, sub-sample 1.

Percentage of nurses reporting taking selected types of medication in past month, by selected characteristics, Canada, 2005

	Pain relievers such as aspirin or Tylenol (including arthritis medicine and anti-inflammatories)	Medicine for blood pressure	Diuretics or water pills	Stomach remedies
	%	%	%	%
Total nurses	82.1	12.6	6.7	22.1
Sex				
Female nurses	82.5*	12.4*	6.8*	22.1*
All employed females (age 21+)	79.3	7.7	3.4	14.0
Male nurses	75.4*	16.1*	5.4* ^E	22.5*
All employed males (age 21+)	64.8	9.4	2.4	11.6
Type of nurse				
RN	81.8	12.2	6.3	22.4
LPN	83.1	14.0	8.3	21.2
RPN	81.8	12.9	7.9	22.1
Age group				
Younger than 35	81.4	1.4 ^E	0.7 ^E	19.6
35 to 44	85.5	6.3	3.4	22.9
45 to 54	82.5	15.8	8.1	23.0
55 or older	76.7	29.1	16.4	22.3
Work setting				
Hospital	82.8	11.5	6.2	23.1
Long-term care facility	82.5	15.8	7.9	21.3
Community health setting	81.4	12.5	6.8	19.8
Other[†]	79.0	13.5	7.7	21.0
Province/Territory				
N.L.	84.7	12.3	6.9	24.8
P.E.I.	81.7	17.0	10.1	24.7
N.S.	83.1	12.6	8.2	29.1
N.B.	83.0	13.8	7.9	28.5
Que.	80.9	11.2	4.2	17.3
Ont.	81.7	13.3	7.5	23.5
Man.	84.1	12.3	6.4	25.4
Sask.	87.1	14.8	9.0	28.2
Alta.	82.5	12.3	7.5	21.2
B.C.	82.0	12.5	7.6	21.1
Y.T., N.W.T., Nvt.[‡]	75.8	12.5 ^E	8.3 ^E	22.6

[†] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2003 Canadian Community Health Survey, cycle 2.1, sub-sample 1.



Average number of medications[†] taken by nurses, and percentage of nurses who reported taking three or more types of medication in past month, by selected characteristics, Canada, 2005

	Average number of medications	Three or more medications %
Total nurses	1.5	17.0
Sex		
Female nurses	1.5*	17.1*
All employed females (age 21+)	1.3	10.6
Male nurses	1.5*	15.9*
All employed males (age 21+)	1.0	5.8
Type of nurse		
RN	1.5	16.5
LPN	1.6	18.8
RPN	1.6	19.8
Age group		
Younger than 35	1.3	8.9
35 to 44	1.5	14.8
45 to 54	1.6	20.1
55 or older	1.7	23.9
Work setting		
Hospital	1.5	16.5
Long-term care facility	1.6	19.5
Community health setting	1.5	16.2
Other[‡]	1.5	16.7
Province/Territory		
N.L.	1.5	13.9
P.E.I.	1.6	17.7
N.S.	1.6	17.8
N.B.	1.6	19.2
Que.	1.4	13.8
Ont.	1.5	17.2
Man.	1.6	19.2
Sask.	1.7	20.1
Alta.	1.6	18.3
B.C.	1.6	20.3
Y.T., N.W.T., Nvt.[§]	1.5	16.6

† Includes pain relievers, blood pressure medication, diuretics, stomach remedies, tranquilizers, antidepressants, codeine/Demerol/morphine, sleeping pills and diet pills.
‡ Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.
§ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.
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* Significantly different from estimate for All employed females/males (p <0.05).

Data sources: 2005 National Survey of the Work and Health of Nurses; 2003 Canadian Community Health Survey (CCHS), cycle 2.1, sub-sample 1.

Percentage of nurses reporting that their physical/mental health made it difficult to handle workload over past four weeks[†], by selected characteristics, Canada, 2005

	Physical health %	Mental health %
Total nurses	31.2	18.4
Sex		
Female nurses	31.3	18.3
Male nurses	28.6	20.3
Type of nurse		
RN	30.4	18.5
LPN	33.8	17.6
RPN	32.9	23.3
Age group		
Younger than 35	34.1	19.3
35 to 44	30.0	20.0
45 to 54	32.3	19.5
55 or older	27.4	12.6
Work setting		
Hospital	32.8	19.2
Long-term care facility	34.8	17.8
Community health setting	27.3	19.9
Other [‡]	22.9	14.0
Province/Territory		
N.L.	34.1	12.6
P.E.I.	27.4	14.5
N.S.	30.0	16.0
N.B.	32.0	17.5
Que.	28.5	15.4
Ont.	32.1	18.9
Man.	34.5	23.1
Sask.	36.7	22.3
Alta.	28.5	19.2
B.C.	33.5	22.1
Y.T., N.W.T., Nvt. [§]	18.8	16.8

[†] Percentage reporting some of the time, half of the time, most of the time or all of the time.

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

[§] Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

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■ Significantly lower than estimate for the other categories of nurses in the group combined ($p < 0.05$).

Data source: 2005 National Survey of the Work and Health of Nurses.



Percentage of nurses reporting a health-related absence from main job[†] and average number of days missed over past year due to health problems, by selected characteristics, Canada, 2005

	Work absence due to					Average days missed over past year due to health problems		Absent 20 or more days over past year due to health problems all nurses
	Physical illness	Mental health	Injury	Disability leave	Any health problem	Nurses with at least one absence	All nurses	
	%	%	%	%	%			%
Total nurses	55.3	11.6	12.2	4.7	61.1	23.9	14.5	13.6
Sex								
Female nurses	55.5	11.4	12.1	4.7	61.2	24.0	14.6	13.7
Male nurses	52.3	14.3	13.7	4.8 ^E	59.2	21.7	12.8	11.4
Type of nurse								
RN	55.4	11.5	11.4	4.5	60.8	22.9	13.8	13.0
LPN	54.3	11.8	15.1	5.5	61.8	28.0	17.1	16.0
RPN	63.9	16.3	14.3	3.6	69.7	20.7	14.4	12.9
Age group								
Younger than 35	59.0	12.1	13.2	5.1	64.3	20.7	13.2	13.7
35 to 44	57.9	13.4	12.1	4.2	63.5	22.2	14.0	12.1
45 to 54	55.4	11.5	12.0	4.8	61.5	25.1	15.3	14.3
55 or older	46.7	8.4	11.2	4.7	52.8	29.0	15.1	14.2
Work setting								
Hospital	59.2	12.8	13.7	4.9	65.0	23.7	15.3	14.3
Long-term care facility	54.9	11.4	13.1	5.3	62.0	28.7	17.6	15.8
Community health setting	52.4	10.5	9.4	3.4	58.3	19.9	11.5	11.7
Other [‡]	40.2	7.3	6.4	3.9	44.4	21.6	9.5	9.1
Province/Territory								
N.L.	64.1	7.1	16.6	1.4 ^E	69.0	18.2	12.5	15.1
P.E.I.	61.4	7.3	10.8	1.2 ^E	64.5	14.2	9.1	9.4
N.S.	60.7	9.0	13.7	3.4	66.5	17.9	11.8	11.3
N.B.	60.7	12.6	11.8	2.4 ^E	65.1	18.6	12.0	11.9
Que.	39.1	10.8	11.0	6.4	48.4	44.0	21.0	18.6
Ont.	58.7	11.2	11.1	4.2	62.6	20.6	12.8	12.3
Man.	63.7	13.9	13.2	3.1	68.0	14.3	9.7	8.1
Sask.	65.8	12.0	14.8	4.0	70.6	18.1	12.7	12.3
Alta.	58.8	10.8	13.1	6.8	64.7	18.8	12.1	12.2
B.C.	64.9	16.5	14.9	3.2	70.8	18.3	12.9	11.6
Y.T., N.W.T., Nvt. [§]	45.5	9.0 ^E	8.2 ^E	F	49.5	13.0 ^E	6.3 ^E	7.4 ^E

[†] The nursing job with the most weekly hours (see Definitions).

[‡] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

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■ Significantly lower than estimate for the other categories of nurses in the group combined (p < 0.05).

^E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

^F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

Data source: 2005 National Survey of the Work and Health of Nurses.

Percentage of and adjusted odds ratios for nurses reporting fair/poor general health, by work organizational factors and other selected control variables, Canada, 2005

Fair/Poor general health							
	%	Adjusted odds ratio	95% confidence interval	%	Adjusted odds ratio	95% confidence interval	
Total nurses	6.6						
Work organizational factors				Other control variables			
Usual shift				Sex			
Days [†]	5.9	1.0	n/a	Female	6.7	1.2	0.8-1.8
Evenings	8.6	1.5	1.0-2.0	Male [†]	5.4 ^E	1.0	n/a
Nights	7.4	1.2	0.8-1.7	Age group			
Mixed	6.8	1.1	0.8-1.5	Younger than 35 [†]	3.4	1.0	n/a
Number of shift changes in past 2 weeks				35 to 44	7.1	2.3	1.6-3.4
None [†]	6.2	1.0	n/a	45 to 54	7.5	2.7	1.8-3.8
1	5.9	0.9	0.6-1.3	55 or older	7.7	2.5	1.7-3.8
2	6.2	1.0	0.7-1.4	Type of nurse			
3 or more	4.9	0.7	0.5-1.1	RN [†]	6.3	1.0	n/a
Multiple job holder				LPN	7.6	0.9	0.7-1.1
Yes	5.8	0.8	0.6-1.1	RPN	9.0	1.3	1.0-1.7
No [†]	6.8	1.0	n/a	Province/Territory			
Usually works more than 40 hours per week				N.L.	5.8	1.1	0.8-1.5
Yes	6.9	1.1	0.9-1.4	P.E.I.	4.5 ^F	0.8	0.5-1.3
No [†]	6.5	1.0	n/a	N.S.	6.7	1.3	1.0-1.8
Covered by union contract or collective agreement				N.B.	6.7	1.3	1.0-1.8
Yes, covered	6.9	1.3	0.9-1.7	Que. [†]	5.4	1.0	n/a
No, not covered [†]	5.6	1.0	n/a	Ont.	7.4	1.5	1.2-2.0
Self-employed	F	0.7	0.3-1.7	Man.	6.9	1.4	1.0-1.8
Work setting				Sask.	7.6	1.5	1.1-2.1
Hospital [†]	6.4	1.0	n/a	Alta.	5.3	1.1	0.8-1.5
Long-term care facility	8.5	1.3	1.0-1.6	B.C.	7.5	1.6	1.1-2.1
Community health setting	5.8	1.0	0.7-1.3	Y.T., N.W.T., Nvt. [§]	5.1 ^E	0.9	0.5-1.6
Other [†]	5.8	1.1	0.8-1.5	Household income quintile			
Daily smoker				Quintile 1	9.7	1.4	1.0-1.9
Yes	9.9	1.7	1.3-2.2	Quintile 2, 3, 4 [†]	7.0	1.0	n/a
No [†]	6.2	1.0	n/a	Quintile 5	5.0	0.7	0.6-0.9
Obese				Daily smoker			
Yes	11.4	1.9	1.5-2.4	Yes	9.9	1.7	1.3-2.2
No [†]	5.9	1.0	n/a	No [†]	6.2	1.0	n/a

† Reference category.

‡ Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

§ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than reference category ($p < 0.05$).

■ Significantly lower than reference category ($p < 0.05$).

E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

n/a: not applicable

Data source: 2005 National Survey of the Work and Health of Nurses. Model based on a sample of 17,880 respondents.



Percentage of and adjusted odds ratios for nurses reporting fair/poor general health, by selected job psychosocial factors, Canada, 2005

	Work stress factors			Nursing Work Index factors		Respect factors		Role overload	
	%	Adjusted odds ratio [†]	95% confidence interval	Adjusted odds ratio [†]	95% confidence interval	Adjusted odds ratio [†]	95% confidence interval	Adjusted odds ratio [†]	95% confidence interval
Total nurses	6.6								
Work stress factors									
High job strain									
Yes	9.9	1.8	1.4-2.2						
No [‡]	4.9	1.0	n/a						
Low supervisor support									
Yes	9.3	1.3	1.0-1.6						
No [‡]	5.6	1.0	n/a						
Low co-worker support									
Yes	7.8	1.2	1.0-1.5						
No [‡]	5.4	1.0	n/a						
High job insecurity									
Yes	9.9	1.4	1.0-1.8						
No [‡]	6.1	1.0	n/a						
High physical demands									
Yes	7.2	1.3	1.1-1.7						
No [‡]	5.2	1.0	n/a						
Nursing Work Index factors[§]									
Low autonomy									
Yes	11.4			1.8	1.4-2.3				
No [‡]	5.2			1.0	n/a				
Low control over practice									
Yes	10.1			1.2	0.9-1.5				
No [‡]	5.8			1.0	n/a				
Poor nurse/physician working relations									
Yes	10.0			1.4	1.1-1.9				
No [‡]	5.7			1.0	n/a				
Respect factors[§]									
Low respect from superiors									
Yes	10.8					1.7	1.3-2.1		
No [‡]	5.8					1.0	n/a		
Low respect from co-workers									
Yes	12.6					1.5	1.0-2.1		
No [‡]	6.4					1.0	n/a		
High role overload									
Yes	10.3							2.2	1.7-2.7
No [‡]	5.2							1.0	n/a
Number of respondents in model		17,373		14,167		15,588		17,497	

† Adjusted for sex, age, type of nurse, province/territory, household income, smoking status, obesity, job organizational factors and other factors in same psychosocial group.
‡ Reference category.
§ Based on nurses who are employees and provide direct care.
■ Significantly higher than reference category (p < 0.05).
n/a: not applicable.

Data source: 2005 National Survey of the Work and Health of Nurses.

Percentage of and adjusted odds ratios for nurses reporting fair/poor mental health, by work organizational factors and other selected control variables, Canada, 2005

Fair/Poor mental health							
	%	Adjusted odds ratio	95% confidence interval	%	Adjusted odds ratio	95% confidence interval	
Total nurses	5.5						
Work organizational factors				Other control variables			
Usual shift				Sex			
Days [†]	4.8	1.0	n/a	Female	5.5	0.9	0.6-1.4
Evenings	7.6	1.5	1.0-2.3	Male [†]	5.6 ^E	1.0	n/a
Nights	6.6 ^E	1.2	0.8-1.8	Age group			
Mixed	5.8	1.0	0.7-1.4	Younger than 35 [†]	5.3	1.0	n/a
Number of shift changes in past 2 weeks				35 to 44	6.7	1.4	1.0-1.9
None [†]	4.8	1.0	n/a	45 to 54	5.7	1.2	0.8-1.7
1	4.9 ^E	1.0	0.6-1.4	55 or older	3.7	0.6	0.4-1.0
2	6.1	1.2	0.8-1.7	Type of nurse			
3 or more	6.3	1.1	0.8-1.7	RN [†]	5.4	1.0	n/a
Multiple job holder				LPN	5.9	0.8	0.6-0.9
Yes	5.6	0.9	0.7-1.2	RPN	6.0	1.0	0.7-1.3
No [†]	5.5	1.0	n/a	Province/Territory			
Usually works more than 40 hours per week				N.L.	2.7	0.6	0.4-0.8
Yes	6.0	1.2	0.9-1.5	P.E.I.	3.5 ^E	0.8	0.5-1.2
No [†]	5.2	1.0	n/a	N.S.	3.1	0.7	0.4-1.0
Covered by union contract or collective agreement				N.B.	5.1	1.0	0.7-1.5
Yes, covered	5.6	1.0	0.7-1.5	Que. [†]	5.0	1.0	n/a
No, not covered [†]	5.2	1.0	n/a	Ont.	6.5	1.4	1.0-2.0
Self-employed	F	0.9	0.3-2.6	Man.	6.0	1.3	0.9-1.9
Work setting				Sask.	6.2	1.4	1.0-1.9
Hospital [†]	5.5	1.0	n/a	Alta.	4.6	1.1	0.7-1.5
Long-term care facility	6.8	1.3	1.0-1.7	B.C.	5.7	1.3	0.9-1.9
Community health setting	5.7	1.2	0.9-1.7	Y.T., N.W.T., Nvt. [§]	3.9 ^E	0.8	0.4-1.6
Other [†]	3.8	0.9	0.6-1.3	Household income quintile			
Daily smoker				Quintile 1	7.3	1.1	0.7-1.5
Yes	10.8	2.3	1.8-3.0	Quintile 2, 3, 4 [†]	6.3	1.0	n/a
No [†]	4.9	1.0	n/a	Quintile 5	3.5	0.6	0.5-0.8
Obese				Daily smoker			
Yes	8.3	1.6	1.2-2.2	Yes	10.8	2.3	1.8-3.0
No [†]	5.2	1.0	n/a	No [†]	4.9	1.0	n/a

† Reference category.

‡ Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

§ Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than reference category ($p < 0.05$).

■ Significantly lower than reference category ($p < 0.05$).

E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

n/a: not applicable.

Data source: 2005 National Survey of the Work and Health of Nurses. Model based on a sample of 17,880 respondents.



Percentage of and adjusted odds ratios for nurses reporting fair/poor mental health, by selected job psychosocial factors, Canada, 2005

	Work stress factors			Nursing Work Index factors		Respect factors		Role overload	
	%	Adjusted odds ratio [†]	95% confidence interval	Adjusted odds ratio [†]	95% confidence interval	Adjusted odds ratio [†]	95% confidence interval	Adjusted odds ratio [†]	95% confidence interval
Total nurses	5.5								
Work stress factors									
High job strain									
Yes	9.4	2.3	1.8-2.9						
No [‡]	3.6	1.0	n/a						
Low supervisor support									
Yes	9.7	1.8	1.4-2.4						
No [‡]	4.0	1.0	n/a						
Low co-worker support									
Yes	7.4	1.4	1.1-1.9						
No [‡]	3.8	1.0	n/a						
High job insecurity									
Yes	9.1	1.4	1.0-1.8						
No [‡]	5.0	1.0	n/a						
High physical demands									
Yes	5.8	0.9	0.7-1.2						
No [‡]	4.7	1.0	n/a						
Nursing Work Index factors[§]									
Low autonomy									
Yes	10.7			1.9	1.4-2.5				
No [‡]	4.2			1.0	n/a				
Low control over practice									
Yes	10.0			1.6	1.2-2.1				
No [‡]	4.4			1.0	n/a				
Poor nurse/physician working relations									
Yes	9.5			1.5	1.2-2.0				
No [‡]	4.6			1.0	n/a				
Respect factors[§]									
Low respect from superiors									
Yes	11.9					2.3	1.8-3.1		
No [‡]	4.4					1.0	n/a		
Low respect from co-workers									
Yes	16.9					2.3	1.6-3.4		
No [‡]	5.1					1.0	n/a		
High role overload									
Yes	10.4							2.8	2.3-3.6
No [‡]	3.7							1.0	n/a
Number of respondents in model		17,373		14,166		15,588		17,497	

† Adjusted for sex, age, type of nurse, province/territory, household income, smoking status, obesity, job organizational factors and other factors in same psychosocial group.
‡ Reference category.
§ Based on nurses who are employees and provide direct care.
■ Significantly higher than reference category (p < 0.05).
n/a: not applicable.

Data source: 2005 National Survey of the Work and Health of Nurses.

Percentage of and adjusted odds ratios for nurses' absences of 20 or more days from their main job[†] in past year due to health problems, by work organizational factors and other selected control variables, Canada, 2005

Absent 20 or more days due to health problems								
	%	Adjusted odds ratio	95% confidence interval	%	Adjusted odds ratio	95% confidence interval		
Total nurses	13.6							
Work organizational factors			Other control variables					
Usual shift			Sex					
Days [†]	12.4	1.0	n/a	Female	13.7	1.3	0.9-1.9	
Evenings	17.8	1.1	0.9-1.4	Male [‡]	11.4	1.0	n/a	
Nights	11.9	0.7	0.5-1.0	Age group				
Mixed	14.5	1.1	0.9-1.4	Younger than 35 [‡]	13.7	1.0	n/a	
Number of shift changes in past 2 weeks			35 to 44			12.1	1.1	0.9-1.4
None [‡]	12.0	1.0	n/a	45 to 54	14.3	1.4	1.2-1.8	
1	11.0	0.8	0.6-1.1	55 or older	14.2	1.5	1.1-1.9	
2	11.1	0.8	0.6-1.1	Type of nurse				
3 or more	12.3	1.0	0.7-1.3	RN [‡]	13.0	1.0	n/a	
Multiple job holder			LPN			16.0	1.1	0.9-1.2
Yes	9.8	0.6	0.5-0.8	RPN	12.9	1.3	1.0-1.5	
No [‡]	14.5	1.0	n/a	Province/Territory				
Usually works more than 40 hours per week			N.L.			15.1	0.7	0.6-0.9
Yes	13.0	1.1	1.0-1.3	P.E.I.	9.4	0.4	0.3-0.6	
No [‡]	14.1	1.0	n/a	N.S.	11.3	0.5	0.4-0.7	
Covered by union contract or collective agreement			N.B.			11.9	0.6	0.5-0.7
Yes, covered	14.9	1.7	1.3-2.3	Que. [‡]	18.6	1.0	n/a	
No, not covered [‡]	8.3	1.0	n/a	Ont.	12.3	0.7	0.5-0.8	
Self-employed	F	0.8	0.3-1.9	Man.	8.1	0.4	0.3-0.5	
Work setting			Sask.			12.3	0.6	0.5-0.8
Hospital [‡]	14.3	1.0	n/a	Alta.	12.2	0.6	0.5-0.8	
Long-term care facility	15.8	1.0	0.9-1.2	B.C.	11.6	0.6	0.5-0.8	
Community health setting	11.7	0.9	0.7-1.1	Y.T., N.W.T., Nvt. ^{††}	7.4 ^E	0.3	0.2-0.6	
Other [§]	9.1	0.7	0.6-1.0	Household income quintile				
			Quintile 1			17.9	1.2	1.0-1.6
			Quintile 2, 3, 4 [‡]			14.2	1.0	n/a
			Quintile 5			11.2	0.8	0.7-1.0
			Daily smoker					
			Yes			16.7	1.3	1.1-1.6
			No [‡]			13.2	1.0	n/a
			Obese					
			Yes			18.7	1.6	1.3-1.9
			No [‡]			12.7	1.0	n/a

[†] The nursing job with the most weekly hours (see Definitions).

[‡] Reference category.

[§] Physicians' offices, private nursing agencies, educational institutions, governments, associations, etc.

^{††} Nurses employed in the territories for any period in the past year were categorized as working in the territories, even if they had also worked elsewhere for a longer period.

■ Significantly higher than reference category (p < 0.05).

■ Significantly lower than reference category (p < 0.05).

E Coefficient of variation between 16.6% and 33.3% (interpret with caution).

F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability).

n/a: not applicable.

Data source: 2005 National Survey of the Work and Health of Nurses. Model based on a sample of 17,647 respondents.



Percentage of and adjusted odds ratios for nurses' absences of 20 or more days from their main job† in past year due to health problems, by selected job psychosocial factors, Canada, 2005

	Work stress factors			Nursing Work Index factors		Respect factors		Role overload	
	%	Adjusted odds ratio‡	95% confidence interval	Adjusted odds ratio‡	95% confidence interval	Adjusted odds ratio‡	95% confidence interval	Adjusted odds ratio‡	95% confidence interval
Total nurses	13.6								
Work stress factors									
High job strain									
Yes	17.2	1.4	1.2-1.7						
No§	11.7	1.0	n/a						
Low supervisor support									
Yes	17.1	1.3	1.1-1.5						
No§	12.2	1.0	n/a						
Low co-worker support									
Yes	15.1	1.1	0.9-1.3						
No§	12.0	1.0	n/a						
High job insecurity									
Yes	12.9	0.9	0.7-1.1						
No§	13.4	1.0	n/a						
High physical demands									
Yes	14.8	1.3	1.1-1.6						
No§	10.8	1.0	n/a						
Nursing Work Index factors††									
Low autonomy									
Yes	17.9			1.2	1.0-1.4				
No§	13.2			1.0	n/a				
Low control over practice									
Yes	19.3			1.2	1.0-1.5				
No§	12.9			1.0	n/a				
Poor nurse/physician working relations									
Yes	16.0			1.0	0.8-1.2				
No§	13.7			1.0	n/a				
Respect factors††									
Low respect from superiors									
Yes	19.9					1.5	1.2-1.8		
No§	13.0					1.0	n/a		
Low respect from co-workers									
Yes	22.3					1.3	1.0-1.7		
No§	13.8					1.0	n/a		
High role overload									
Yes	17.5							1.4	1.2-1.7
No§	12.2							1.0	n/a
Number of respondents in model		17,174		13,988		15,377		17,273	

† The nursing job with the most weekly hours (see Definitions).

‡ Adjusted for sex, age, type of nurse, province/territory, household income, smoking status, obesity, job organizational factors and other factors in same psychosocial group.

§ Reference category.

†† Based on nurses who are employees and provide direct care.

■ Significantly higher than reference category (p < 0.05).

n/a: not applicable.

Data source: 2005 National Survey of the Work and Health of Nurses.

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