



CANADIAN NURSES ASSOCIATION
ASSOCIATION DES INFIRMIÈRES ET INFIRMIERS DU CANADA

Trends in Illness and Injury-Related Absenteeism and Overtime Among Publicly Employed Registered Nurses

Summary of Key Findings

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Trends in Illness and Injury-Related Absenteeism and Overtime Among Publicly Employed Registered Nurses

Introduction

This summary report examines trends in illness and injury related absenteeism and overtime among Nurse Supervisors and Registered Nurses. Selected years of Statistics Canada's Labour Force Survey (LFS) are used to examine: 1) the number and percentage of nurses absent each week to illness and injury, by age and part-time/full-time status; 2) absenteeism among nurses compared with the overall employed labour force and selected occupational groups, 3) the total hours lost due to illness and injury related absenteeism; 4) changes in the incidence of overtime by age and full-time part-time status; 5) estimates of the annual aggregate hours of overtime and their full-time equivalents; 6) seasonal and provincial patterns of absenteeism; and 7) overtime to absenteeism ratio by month and province. New items in this report from the previous reports include points 6-7.

Methodology

The research draws upon the public use microdata files (PUMF) of Statistics Canada's Labour Force Survey (LFS). The LFS is representative of the civilian, non-institutionalized population aged 15 and over in Canada's ten provinces. Each month, approximately 54,000 households are surveyed, and labour force information is obtained for all civilian household members 15 years of age or older. The sample data are weighted to enable tabulations of estimates at the national level. More detail on the LFS can be found in the Statistics Canada publication, *Guide to the Labour Force Survey* (Catalogue no. 71-543-GIE).

The Tables in this report pertain to employed Nursing Supervisors and Registered Nurses (1991 Standard Occupational Classification, Major Group D1) who are/were public employees in the Health and Social Assistance sector (North American Industry Classification System (NAICS) Major Group 62).

In the analysis of absenteeism, all 12 monthly LFS surveys for each of the calendar years 1987, 1992, 1997, 2001, 2002 and 2005 were used to produce annual estimates, using the following method. Each month, the Labour Force Survey collects data about hours lost from work due to own illness or disability during a one-week period (this is known as the survey reference week). As a result, information about hours lost is available for a sample of 12 weeks in 2001 (one week per month). The estimation technique begins with the assumption that the total number of lost hours due to illness and disability for a given survey reference week is representative of the lost hours in the rest of that month. Aggregate lost hours due to illness and disability for each month of 2001 was calculated using the formula: (aggregate lost hours in the survey reference week \div 7 days) \times the number of days in the survey month. The total number of lost hours in 2001 is simply the sum of the 12 survey months. In the case of part-week absences, the actual hours lost were used in the estimation. In the case of full-week absence, the usual hours worked were taken as the number of hours lost.

In the analysis of overtime, all 12 monthly LFS surveys for each of the calendar years 1997, 2001, 2002 and 2005 were used to produce annual estimates, using the following method. Each

month, the Labour Force Survey collects data about the number of overtime hours worked during a one-week period (this is known as the survey reference week). As a result, information about overtime hours is available for a sample of 12 weeks in each year (one week per month). Our estimation technique begins with the assumption that the number of overtime hours worked in a given survey reference week is representative of the overtime hours worked in the rest of that month. Aggregate overtime hours for each month of each survey year were calculated using the formula: (aggregate hours of overtime in the survey reference week \div 7 days) \times the number of days in the survey month. The total number of overtime hours worked in each survey year is simply the sum of the 12 survey months. The same estimation technique was used to calculate annual aggregate hours of paid overtime and unpaid overtime. The LFS uses a broad definition of overtime, which includes any hours worked during the reference week of the survey in excess of the usual, standard, or scheduled hours of work. Overtime hours include all extra hours of work, whether the work was done at a premium or regular wage rate, or without pay.

A Note of Caution: The Labour Force Survey estimates presented in this report are subject to sampling error. Given the (unweighted) sample sizes underlying these average annual estimates (in 2005, an average of 882 publicly employed Nurse Supervisors and Registered Nurses were surveyed each month; 2002 = 983; 2001 = 871 per month; 1997 = 820 per month; 1992 = 1,048 per month; 1987 = 817 per month), some weighted estimates, particularly those under 50,000 could have a large degree of statistical uncertainty. While all estimates presented in this report exceed Statistics Canada's minimum size for release (see Statistics Canada, Catalogue no.71-543-GIE), readers are urged to acknowledge the possible error estimates in their interpretation and use of findings.

Absenteeism - Key Findings

Table 1, Table 1.1 and Table 1.2 provides estimates of the average weekly number of public sector Nurse Supervisors and Registered Nurses absent due to illness and injury. Rates of illness and injury-related absenteeism are also shown, with breakdowns by full-time, part-time status and age in Table 1, and by family type and age of youngest child in Table 1.2. Table 1 and 1.2 may be summarized as follows:

- In 2005, 97.18% of all Registered Nurses and Nursing Supervisors worked in the Health Care and Social Assistance Sector (Table 1.1). The analyses in this paper are based on the 215,500 nurses working in this sector.
- In 2005, an average of 16,500 nurses were absent each week due to illness and injury. This is a 5.2% decline from 2002, although the number of public sector Nurse Supervisors and RNs was about the same. (5.2% decline compared with 0.09% growth in total number of nurses)
- In 2002, an average of 17,400 nurses were absent each week due to illness or injury. This number is substantially greater than the estimated 9,400 nurses absent each week in 1987 (an 85% increase). An increase in the number of nurses absent due to illness or injury might be expected given the increase in the total number of public sector Nurse

Supervisors and RNs. However, the growth in the number of absent nurses far outpaced the growth in employment (85% compared with 23%).

- In 2005, the rate of illness and injury-related absenteeism stood at 7.6%, considerably higher than the estimated rate of 5.3% in 1987. Over this 18-year period (1987 to 2005), the absenteeism rate increased by 2.3 percentage points (a 43 per cent increase in the rate).
- Significant increases in illness and injury-related absenteeism are also evident in more recent periods. For example, between 1997 and 2005, the rate increased from 6.8 per cent to 7.6 per cent. This represents an 11.7 per cent increase in the rate of absenteeism over an eight-year span.
- In all years shown in Table 1, the rate of absenteeism among full-time workers (30 or more hours per week) is roughly 50% higher than the rate among part-time workers. However, both groups have experienced an increase in illness and injury-related absenteeism since 1987.
- Rates of illness and injury-related absenteeism have increased among all age groups of employed Nurse Supervisors and RNs, and among all age groups of full-time Nurse Supervisors and RNs since 1987. However, in 2005 there is a decrease in the absenteeism rate among nurses less than 45 years of age, and an increase in the absenteeism rate among nurses above 55 years of age compared to 2002.
- In 2005, the absenteeism rate is highest among unattached individuals (9.7%) and the lowest among single earner couples where the wife is employed and youngest child is between 18-24 years of age (5.4%). Since 1987, there has been an increase in the illness and injury-related absenteeism rate across all family types. Single parent families have typically higher absenteeism rate than dual earner couple family types, but the average rate of absence in husband-wife single earner family types does not differ much whether it is the wife (6.7%) or husband (6.9%) that is employed.
- Among unattached nurses the absenteeism rate in 2005 is the highest between the ages 35-44 (17.6%), and the lowest among those under 35 years of age (5.6%) and over 55 years of age (5.7%). Since 1987, the rate of absenteeism for unattached nurses has declined among those under 35 years of age (from 7.8% to 5.6%), and increased among those between the ages 35-44 (from 4.4% to 17.6%) and 45-49 (from 1.0% to 10%) and 50-54 (from 3.5% to 15%). It should be noted that changes in nurses' age structure might account for some of the changes in the absenteeism rate.
- The rate of absenteeism in 2005 and 2002 is the lowest among nurses whose child is under the age of 3 (5.3%), and the highest among those who have children between the ages of 3 to 5 (8.7% and 8.5% respectively).

Table 2 and Figure 1 show the rate of illness and injury related absenteeism among Nurse Supervisors and RNs compared with other occupations. The Table may be summarized as follows:

- In 2005, RNs working full-time had a rate of absence due to illness and injury that was 58 per cent higher than the rate found among the overall full-time employed labour force (7.9% compared with 5.0%).
- A comparison of 47 broad categories of occupation (based on the 1991 Standard Occupational Classification System) shows that Nurse Supervisors and Registered Nurses in the public health care sector have one of the highest rates of illness and injury related absenteeism. In 2005, the rate among RNs was second only to the occupational group titled “Assisting Occupations in Support of Health Services”. Nurses’ rate of absence due to illness and injury is higher than the rate among labourers in manufacturing, construction trades workers, and secretaries.

Table 3 provides estimates of the aggregate annual hours of work lost to illness and injury-related absenteeism. Aggregate annual hours lost is then expressed in full-time full-year equivalents, where one full-time full-year equivalent job is equal to 1,813 hours per year (49 weeks at 37 hours per week). **Figure 9** displays the duration of time off in percentage of absent publicly employed nurses by full week absence and part-week absence in number of hours for 2005. If a nurse was absent the full week, usual working hours are reported as hours lost due to illness and injury. Actual hours absent are reported if a nurse was absent only a part of the week. Table 3 and Figure 9 can be summarized as follows:

- During 2005, an average of 16,500 publicly employed Nurse Supervisors and Registered Nurses were absent each week due to illness or injury. Each absent nurse was, on average, absent for 20.0 hours, resulting in a total timework loss of 340,000 hours per week. On an annual basis, hours lost totalled 17.7 million hours, the equivalent of 9,754 full-time full-year nursing jobs.
- The aggregate annual hours lost to illness and injury related absenteeism appears to have increased steadily over the period 1987 through 2002, but we see a 10% decline in aggregate hours lost from 2002 to 2005. Aggregate hours lost to illness and injury related absenteeism was 52% higher in 2005 as compared with 1987, while the average number of nurses absent each week increased by 75% over the same period. Hours lost per absent nurse declined substantially (from 23.8 hours in 1987 to 20.0 hours in 2005 - a 19% decline).
- In 2005, 61% of absent nurses were absent for only a part of the week, whereas 39% were absent the full week. Of those who were absent part of the week, 97% were absent for 1-24 working hours.

Overtime – Key Findings

This section examines the incidence of overtime among nursing supervisors and registered nurses as measured by the LFS. Estimates of the total number of overtime hours worked on an annualized basis are developed, and converted into full-time full-year job equivalents.

Table 4 provides estimates of the average weekly number of public sector Nurse Supervisors and Registered Nurses working overtime hours. Rates of unpaid and paid overtime are also shown, with breakdowns by full-time part-time status and age. Table 4 may be summarized as follows:

- Among publicly employed nursing supervisors and registered nurses in the health and social assistance sector, an average of 54,400 of them worked paid or unpaid overtime in any given week of 2005, accounting for 29.3 percent of RNs who were at work. This rate of overtime is higher than the estimated 26.7 percent in 2002 and considerably higher than the rate of 15.3 percent in 1997.
- Approximately 12.8 percent of RNs worked overtime hours without compensation in 2005, while 19.9 percent reported paid overtime hours. It should be noted that some nurses work both unpaid and paid overtime hours in a given week. As a result, the sum of the percentage working unpaid overtime and the percentage working paid overtime is greater than the total percentage working overtime. The rates of unpaid overtime and paid overtime both increased since 1997, from 7.1% to 12.8% in the case of unpaid overtime, and from 9.0 to 19.9% in the case of paid overtime.
- Nursing supervisors and registered nurses are more likely than the rest of the employed labour force to work overtime (**Figure 2**). In 2005, the incidence of overtime among publicly employed RNs was 29.3 percent compared to 19.5 percent for the rest of employed labour force. Most of this difference is due to nurses' greater likelihood of working paid overtime hours. Nursing supervisors and registered nurses are more likely to work paid overtime than unpaid overtime. This is the opposite of the pattern found among the rest of the employed labour force, and most likely is a result of the high rate of unionization among RNs, where rules governing hours of work and overtime compensation are clearly specified within collective agreements.
- The likelihood of working overtime varies somewhat in relation to age, but the differences between age groups are not large. In 2005, publicly employed RNs over 55 years of age were the least likely to work overtime (25.8%) while RNs aged 45 to 49 were the most likely to work overtime (33.4%). Across all age groups, overtime work is a common experience that pertains to one in four nurses each week. Over the past eight years (1997 to 2005), all age groups of nurses experienced increases in the likelihood of working unpaid and paid overtime.
- Given the broad definition of overtime work used in this analysis – that is, hours worked in excess of standard or scheduled hours – it is possible that both full-time and part-time nurses are working “overtime”. For example, a part-time nurse scheduled for 20 hours of work, but actually working 25 hours, would report five hours of overtime according to the

LFS methodology. In 2005, about one in five part-time nurses (19.8%) worked overtime each week. However, full-time nurses were somewhat more likely to report overtime hours (32.3%). Compared with 2002, both part-time and full-time nurses in 2005 were more likely to work overtime. In the case of full-time nurses for example, the incidence of weekly overtime increased from 29.1 per cent to 32.3 per cent.

Table 5 presents estimates of the aggregate annual hours of overtime worked by public sector Nurse Supervisors and Registered Nurses. Key findings from the Table are as follows:

- Each week in 2005, an estimated 54,400 nursing supervisors and registered nurses work an average of 6.4 hours of overtime. This overtime consists of both paid and unpaid hours over and above the standard or scheduled work hours. On average, two-thirds of overtime workers (36,900 nurses each week) report having received overtime pay (or time in lieu) for at least some of their overtime hours, while 43.7 percent of overtime workers report that some of their hours were unpaid. (Note that the percentage working paid overtime plus the percentage working unpaid overtime exceeds 100 percent since some nurses report both paid and unpaid overtime hours).
- While the estimated number of nurses working overtime increased by 58% between 1997 and 2005 (from 22,600 to 54,400) the average hours of overtime worked each week remained the same (6.4 hours).
- In 2005, the total overtime hours (paid and unpaid) amounted to an estimated 349,800 hours per week, or 18.2 million hours when hours are aggregated on an annual basis. These aggregated annual overtime hours are equivalent to 10,054 full-time full-year positions (assuming 49 weeks of employment per year with a 37 hour workweek). In a sense, this can be interpreted as the number of positions that would be required to eliminate overtime (extra hours over and above standard or scheduled work), given current human resource and scheduling practices. Since 1987, the number of full-time equivalent jobs gained through overtime has increased from 4,125 to 10,054 – a 144 per cent increase.
- The total annual number of overtime hours can also be divided into paid and unpaid hours. In 2005, the largest share of overtime hours (74%) was remunerated through either pay or time in lieu. However, a significant share of overtime hours was reported as unpaid (26%). Expressed in terms of full-time equivalent jobs, paid overtime in 2005 amounted to 7,468 jobs.

Table 6 and Figure 1.1 display fraction of nurses working overtime by job tenure and job tenure by age respectively. Job tenure and overtime can be summarized as follows:

- Overtime-hours increases with job tenure, but decreases after 120 months of employment.
- Job tenure increases with age: 21% of all nurses have both job tenure of 20 years or more and are over the age of 45.

Seasonal and Provincial Absenteeism Rate Patterns –Key Findings

This section examines the seasonal pattern of illness and injury-related absenteeism among nursing supervisors and registered nurses as measured by the LFS. Differences in the absenteeism rate across the provinces are also reported.

Figure 3 and Figure 4 provide seasonally adjusted absenteeism rate among nursing supervisors and registered nurses by month for each year of the LFS survey. **Figure 5** illustrates the average absenteeism rate across provinces for the years 1987-2005. **Figure 6** provides provincial differences in the absenteeism rate among nursing supervisors and registered nurses for each year of the LFS surveys. Figure 3, 4, 5 and 6 may be summarized as follows:

- In 2005, the seasonal adjusted illness and injury-related absenteeism rate was the highest in February and April and the lowest in June. The absenteeism rate is generally stable throughout the year, but declines in the summer months, especially in June.
- The seasonal effects are factors that are reasonably stable in terms of annual timing, direction, and magnitude. Figure 4 illustrates this effect, where one can expect absenteeism to be higher in February, August and December, and lower in March, July and October. The seasonal effects are often stable because of natural causes, administrative measures (such as starting and ending dates of the school year) and fixed holidays such as Christmas.
- Average absenteeism rate from 1987 to 2005 is generally even across provinces (around 7%) except for Prince Edward Island, Ontario and Alberta (around 5%).
- In 2005, nurses residing in Alberta and Prince Edward Island had the lowest absenteeism rate (6%) compared to rest of the provinces. Nurses living in Nova Scotia, New Brunswick and Saskatchewan had the highest absenteeism rate (10%). Since 1987 the absenteeism rate in PEI has increased from 1.6% to 6.4% in 2005, (a 290% increase in the rate), and from 4% to 10.3% in Nova Scotia (a 155% increase in the rate), and from 3% to 9.9% in Saskatchewan (a 255% increase in the rate). The absenteeism rate has remained relatively stable in Manitoba (from 6.1% to 7.4%), Alberta (from 5.1% to 6.3% and British Columbia (from 6.6% to 8.4%), a 22%, 25% and 22% increase in the rate respectively.
- Since 2002, the absenteeism rate has declined in Prince Edward Island (from 8.7% to 6.4%, a 27% decline in the rate), in Quebec (from 8.8% to 8.2%, a 7% decline in the rate) in Ontario (from 7.5% to 6.6%, a 12% decline in the rate), in Saskatchewan (from 10.8% to 9.9%, a 8.3% decline in the rate) Alberta (from 7.4 to 6.3%, a 14.6% decline in the rate) and in British Columbia (from 9.2% to 8%, a 13% decline in the rate).

Overtime to Absenteeism Ratio – Key Findings

This section describes the overtime to absenteeism ratio among publicly employed nursing supervisors and registered nurses. This ratio determines how many nurses are working overtime per each absent nurse. The ratio is calculated the following way: Overtime to absenteeism ratio for nurses working overtime and number of absent nurses due to illness and injury for each province and month of 2005 was calculated using the formula: $(\text{aggregate nurses}^1) \times \frac{\text{the number of days in the survey month}}{7 \text{ days}}$. The total number of overtime nurses and absent nurses in each province is simply the sum of the 12 survey months. For each province and month, total number of nurses working overtime divided by total number of absent nurses gives the overtime to absenteeism ratio. **Figure 7 and Figure 8** may be summarized as follows:

- The overtime to absenteeism ratio is highest in September (4.63), October (4.17) and November (3.90) compared to the rest of the year, and the lowest in February (2.18) and April (2.59). There are more than twice as many nurses working overtime for each absent nurse in September as in February. In 2005, there are more nurses working overtime per absent nurse in the last quarter of the year (average 3.9) than in the first quarter of the year (average 2.77).
- Alberta has the highest overtime to absenteeism ratio (4.6), and New Brunswick has the lowest (2.0). Newfoundland and Labrador, Nova Scotia and Saskatchewan have all overtime to absenteeism ratios close to 2, whereas Quebec, Ontario and Manitoba have ratios closer to 3.5.

Estimated Cost of Absenteeism and Overtime²

Figure 9 displays the estimated cost of absenteeism and overtime. To the extent that we can put a dollar value on lost hours and overtime hours, we have assumed the usual hourly wage rate can be used as a proxy in determining the cost. It is also assumed that nurses working paid overtime are paid a premium rate of 1.5. The estimated cost is simply the sum of hours lost per week multiplied by the weighted average wage rate. Figure 9 can be summarized as follows:

- The weekly cost of absenteeism in 2005 amounted to an estimated \$ 9,455,000. This is equivalent to a yearly cost of \$ 463,415,000.
- The cost of overtime paid with a premium amounted to an estimated \$ 10,986,000, equivalent to a yearly cost of \$ 538,297,000.
- Unpaid overtime, a cost beared by the nurses in terms of lost time, amounted to an estimated \$ 2,542,000 per week, equivalent to \$ 124,538,000.

¹ Repeated for number of nurses working overtime and for number of absent nurses.

² A Note of Caution: The estimated costs are based on available data in the LFS – usual hourly wage rate, and do not reflect actual costs. Readers are urged to acknowledge possible error estimates in their interpretation and use of findings. Estimates are based on broad assumptions about premium overtime rate.

- The total cost of absenteeism and overtime amounted to an estimated \$ 1,126,150,000 per year.

	1987	1992	1997	2001	2002	2005
Number of Nurse Supervisors and RN's	175,300	182,500	172,400	186,100	215,700	215,500
Number Absent per week	9400	9200	11700	13700	17,400	16,500
<u>Rate of Absence per week (%)</u>	5.3	5.0	6.8	7.4	8.0	7.6
Full-time (30+ hrs/week)	5.9	5.7	7.6	8.4	8.9	7.9
Part-time	4.0	3.4	5.0	5.3	5.7	6.7
Under 35 years of age	5.0	5.1	6.4	7.2	8.2	7.3
35-44	5.4	5.4	6.1	6.6	8.2	6.7
45-49	4.8	4.1	6.8	8.2	6.8	7.5
50-54	7.0	4.2	9.1	7.0	8.9	8.8
55 years of age and over	7.1	5.8	7.8	9.1	7.9	8.9
<i>Full time by age</i>						
Under 35 years of age	5.8	6.0	7.4	7.8	9.1	7.5
35-44	5.5	6.3	7.0	7.1	9.0	7.5
45-49	5.6	4.4	7.3	9.3	8.0	7.1
50-54	7.3	4.6	9.1	7.3	8.8	8.4
55 years of age and over	7.4	5.7	9.5	10.5	9.2	9.8

¹ Based on the 1991 Standard Occupational Classification, Major Group D1, Nurse Supervisors and Registered Nurses. Excluded are Licensed Nursing Assistants (LNAs), Licensed Practical Nurses (LPNs), and Registered Nursing Assistants (RNAs), and nurses not employed in publicly funded institutions within the health care and Social Assistance Sector (i.e. North-American Industry Classification System (NAICS) Major Group 62). Estimated numbers are rounded to nearest 100. Rates of absence are calculated using unrounded estimates.

	Number of Publicly Employed Nurses	Percentage
Utilities	17	0.01%
Transportation	105	0.05%
Insurance Carriers & Related Activities and Funds & Other Financial Vehicles	204	0.09%
Education and Services	669	0.30%
Health Care and Social Assistance	215,488	97.18%
Federal Government Public Administration (including Defence Services)	518	0.23%

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Provincial and Territorial Public Administration	1,566	0.71%
Local, Municipal & Regional Public Administration and Aboriginal & Other Extra-Territorial Public Admin	3,186	1.44%

Rate of Illness and Injury Related Absenteeism among Public Sector Nursing Supervisors and Registered Nurses by Family Type and age of youngest child, Canada, Selected Years					
	1987	1992	1997	2002	2005
<i>Family Type</i>					
Husband-wife dual earner couple, no children < 25	5.6	5.2	7.6	9.6	7.7
Husband-wife dual earner couple, youngest child < 18	5.2	4.0	5.0	6.5	6.0
Husband-wife dual earner couple, youngest child 18 to 24	3.6	2.6	4.5	7.7	7.7
Husband-wife single earner couple, husband employed, no children < 25	6.0	4.9	14.2	1.0	6.1
Husband-wife single earner couple, husband employed, youngest child < 18	1.7	-	5.5	14.7	9.1
Husband-wife single earner couple, husband employed, youngest child 18 to 24	6.3	9.4	-	7.0	-
Husband-wife single earner couple, wife employed, no children < 25	5.6	7.0	9.7	6.5	6.9
Husband-wife single earner couple, wife employed, youngest child < 18	4.2	6.0	6.2	11.5	6.7
Husband-wife single earner couple, wife employed, youngest child 18 to 24	4.7	5.3	10.1	5.2	5.4
Single-parent family, parent employed, youngest child < 18	6.5	11.1	6.5	9.9	8.4
Single-parent family, parent employed, youngest child 18 to 24	7.0	16.8	3.4	-	8.4
Other family types	6.0	3.3	8.7	21.0	13.5
Unattached individual	5.9	6.5	10.8	9.2	9.7
Under 35 years of age	7.8	4.5	7.0	8.3	5.6
35-44	4.4	11.7	12.0	5.8	17.6
45-49	1.0	4.7	13.9	12.3	10.0
50-54	3.5	3.0	15.8	10.3	15.0
55 years of age and over	4.3	8.1	7.0	13.3	5.7
<i>Age of youngest own child</i>					
Youngest child under 3	3.8	4.2	5.5	5.3	5.3
Youngest child 3 to 5	6.2	3.3	4.9	8.5	8.7
Youngest child 6 to 12	5.4	5.4	5.5	7.4	6.2
Youngest child 13 to 15	5.0	5.1	6.1	7.5	6.2
Youngest child 16 to 17	8.8	6.7	3.9	7.0	7.8
Youngest child 18 to 24	6.2	4.6	5.0	8.3	7.8

Rate of Illness and Injury Related Absenteeism, Selected Occupations¹, Canada					
	Percent Absent per week				
	1987	1992	1997	2002	2005
Assisting Occupations in Support of Health Services	6.1	5.9	7.1	9.0	9.8
Publicly Employed Nurse Supervisors and RN's	5.9	5.7	7.6	8.6	7.9
Labourers in Processing, Manufacturing and Utilities	6.2	5.6	5.2	7.5	7.7
Assemblers in Manufacturing	6.6	5.0	4.5	7.0	6.5
Technical and Related occupations in Health	4.6	4.8	5.4	6.0	7.7
Construction Trades	4.0	3.4	3.1	5.3	4.5
Secretaries	3.7	3.7	3.9	5.0	5.9
All Occupations ²	3.6	3.2	3.4	4.8	5.0
Professional Occupations in Natural and Applied Sciences	2.5	2.1	2.3	3.3	3.8
Professional Occupations in Health	1.1	2.1	1.8	6.0	2.6

¹ Based on the 1991 Standard Occupational Classification
² Except publicly Employed Nurse Supervisors and Registered Nurses

Figure 1: Rate of Illness and Injury-Related Absenteeism, Full-time Workers, Canada

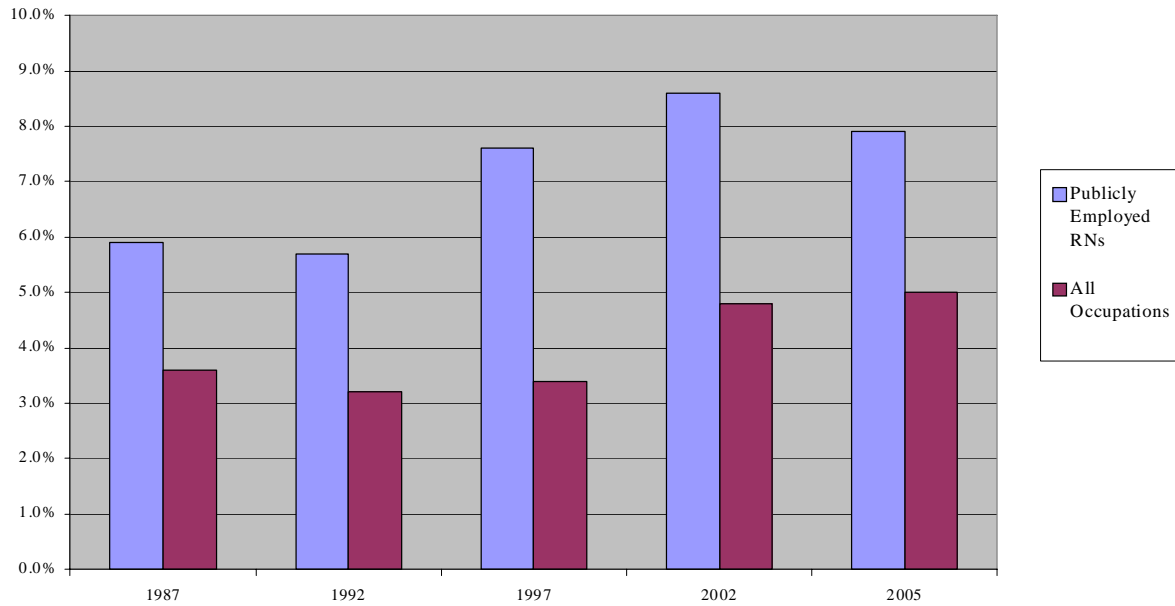


Table 3

Number of Hours Lost to Illness and Injury, Showing full-time, Full-year Equivalents, Public Sector Nursing Supervisors and Registered Nurses¹, Canada, Selected Years

	1987	1992	1997	2001	2002	2005
Number of Nurse Supervisors and Registered Nurses Absent per week due to illness/Injury	9,400	9,200	11,700	13,700	17,400	16,500
Hours Absent per Absent Nurse (per week)	23.8	25.4	25.8	22.7	21.8	20.7
Aggregate Hours of Work Absence due to illness and Injury						
Hours lost per week (thousands)	222	233	302	311	379	340
Hours lost per year (millions)	11.6	12.1	15.8	16.2	19.7	17.7
Full-time, Full-year Equivalent (per year) ²	6,387	6,701	8,703	8,956	10,900	9,754
Full-time, Full year equivalents to be regained if Nurses' rate of absence due to illness or disability were reduced to the rate of the overall employed population ³	2,077	2,355	4,262	3,481	4,409	3,294

¹ Based on the 1991 Standard Occupational Classification, Major Group D1, Nurse Supervisors and Registered Nurses Excluded are Licensed Nursing Assistants (LNAs), Licensed Practical Nurses (LPNs), and Registered Nursing Assistants (RNAs), and nurses not employed in publicly funded institutions within the Health Care and Social Assistance sector (i.e. North American Industry Classification System (NAICS) Major Group 62). Estimated numbers are rounded to nearest 100. Rates and hours of absence are calculated using unrounded estimates.

²One full-time full-year equivalent job is equal to 1,813 hours per year (49 weeks at 37 hours per week).

³ The rate of absence due to own illness and disability was 4.7 % among the full-time employed population in 2002. The reduction in absent hours associated with this reduced rate of absenteeism, expressed as full-time full-year equivalents, assumes a random reduction of absenteeism and no change in the average duration of absence. For each year shown in the table, the calculation of FTEs regained is based on that year's absenteeism rates.

Prepared by Informetrica Limited using Statistics Canada's Labour Force Survey public use microdata files.

Table 4					
Incidence of Overtime among Public Sector Nursing Supervisors and Registered Nurses, by Age Groups and Full-time Status, 1997, 2001, 2002 and 2005, Canada					
	Number of Employees at work per week	Number working overtime per week	Percentage working overtime	Percentage working unpaid overtime	Percentage working paid overtime
1997	147,000	22,600	15.3	7.1	9.0
2001	160,700	38,400	23.9	10.0	15.8
2002	187,100	49,900	26.7	11.8	17.4
2005	185,400	54,400	29.3	12.8	19.9
<u>Age less than 35</u>					
1997	38,500	6,000	15.5	6.4	9.7
2001	39,700	8,400	21.2	6.6	16.5
2002	46,500	11,300	24.3	7.7	19.6
2005	46,000	12,100	26.3	10.0	19.8
<u>Age 35-44</u>					
1997	52,500	7,900	15.0	6.6	9.3
2001	49,000	11,800	24.1	9.7	16.1
2002	56,300	15,300	27.2	13.0	16.6
2005	52,600	16,300	31.0	12.6	21.6
<u>Age 45-49</u>					
1997	29,100	4,500	15.3	7.5	8.7
2001	28,700	8,300	28.9	12.6	18.8
2002	31,000	7,800	25.2	11.0	16.3
2005	29,000	9,700	33.4	16.7	20.2
<u>Age 50-55</u>					
1997	16,600	2,900	17.4	8.6	10.0
2001	25,000	5,600	22.4	10.7	13.2
2002	30,900	9,600	31.0	16.4	17.5
2005	29,800	9,100	30.5	14.7	19.8
<u>Age 55+</u>					
1997	10,400	1,300	12.9	8.9	4.3
2001	18,300	4,200	23.2	13.4	12.6
2002	22,400	5,900	26.3	12.0	17.2
2005	27,900	7,200	25.8	11.7	16.6
<u>Full-time (30+ hrs/week)</u>					
1997	103,300	16,400	15.9	7.9	8.8
2001	120,000	30,100	25.1	10.7	16.5
2002	140,700	41,000	29.1	13.6	18.5
2005	140,400	45,400	32.3	13.9	22.2
<u>Part-time (<30 hrs/week)</u>					
1997	43,800	6,200	14.1	5.1	9.4

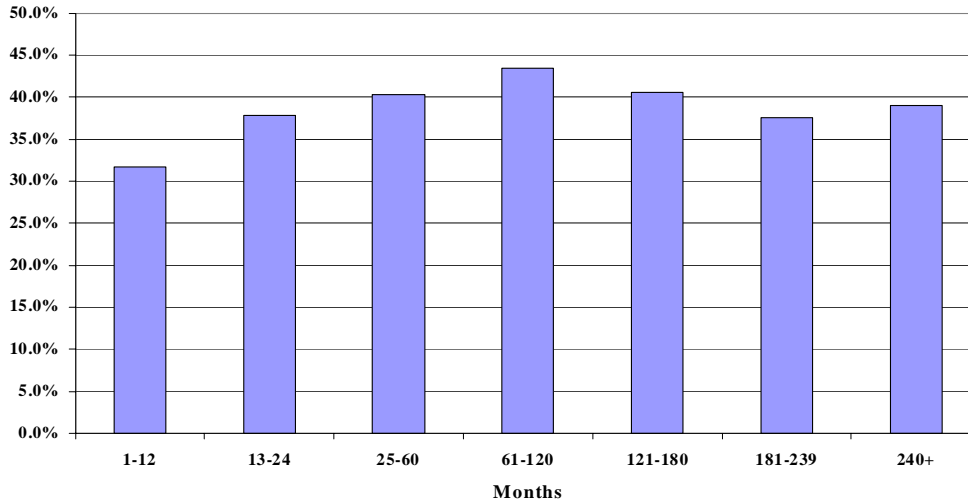
2001	40,700	8,300	20.3	7.9	13.7
2002	46,400	8,700	18.7	6.6	14.0
2005	45,000	8,900	19.8	9.5	12.7

Table 5
Annual Aggregate Number of Overtime Hours Worked by Publicly Employed Nurse Supervisors and Registered Nurses, 1997, 2001, 2002, 2005, Canada

	All Overtime	Unpaid Overtime	Paid Overtime
Average numbers of Nurses working overtime each week ¹			
1997	22,600	10,400	13,300
2001	38,400	16,100	25,400
2002	49,900	22,000	32,600
2005	54,400	23,800	36,900
Average hours of overtime per overtime worker per week			
1997	6.4	4.9	6.9
2001	6.4	4.2	6.9
2002	6.2	4.1	6.7
2005	6.4	3.8	7.0
Aggregate number of overtime hours per week ²			
1997	143,200	51,200	92,100
2001	243,900	67,800	176,100
2002	307,900	90,300	217,600
2005	349,800	90,000	259,800
per year ³			
1997	7,478,600	2,665,400	4,813,200
2001	12,722,200	3,529,600	9,192,600
2002	16,061,700	4,704,000	11,357,700
2005	18,227,900	4,689,000	13,538,800
Aggregate Annual Overtime Hours as Full-time, Full-year Equivalents (FTEs) ⁴			
1997	4,125	1,470	2,655
2001	7,017	1,947	5,070
2002	8,859	2,595	6,265
2005	10,054	2,586	7,468
FTEs as a proportion of total publicly employed nurses in the Health and Social Assistance sector			
1997	2.4%	0.9%	1.5%
2001	3.8%	1.0%	2.7%
2002	4.7%	1.2%	2.9%
2005	4.7%	1.2%	3.5%

¹ Overtime Refers to any hours of work over and above standard or scheduled paid weekly hours, whether those extra hours were paid or unpaid.
² Aggregate hours of overtime per week is an annual average of 12 LFS survey reference weeks in each year
³ Aggregate hours of overtime each month of each survey year was calculated as follows: Aggregate survey month hours =(survey reference week aggregate hours / 7) * number of days in the survey month.
 Aggregate overtime hours per month is the average of the 12 survey month estimates. Aggregate hours per year is the sum of the 12 survey month estimates of aggregate overtime hours.
⁴One FTE is equal to 1813 hours per year (49 weeks at 37 hours per week).

Figure 1.1: Fraction of Nurses Working Overtime by Job Tenure (Months) 2005



Tenure: Months	1-12	13-24	25-60	61-120	121-180	181-239	240+
Age Under 35	9,698	10,453	19,250	13,196	2,577	501	68
Age 35-44	5,106	2,870	10,138	10,359	9,970	15,246	7,571
Age 45-49	1,531	989	3,400	4,232	2,459	5,747	13,731
Age 50-54	637	1,474	3,223	3,234	2,734	6,538	16,509
Age 55 and over	412	1,767	3,571	3,293	3,393	4,517	15,118
<i>Percentage</i>							
Age Under 35	4.50%	4.85%	8.93%	6.12%	1.20%	0.23%	0.03%
Age 35-44	2.37%	1.33%	4.70%	4.81%	4.63%	7.07%	3.51%
Age 45-49	0.71%	0.46%	1.58%	1.96%	1.14%	2.67%	6.37%
Age 50-54	0.30%	0.68%	1.50%	1.50%	1.27%	3.03%	7.66%
Age 55 and over	0.19%	0.82%	1.66%	1.53%	1.57%	2.10%	7.02%

Table 7: Estimated Cost of Absenteeism and Overtime, 2005	
<i>Absenteeism</i>	
Absent nurses per week	16,500
Hours lost per week	340,000
Weighted average wage rate ¹	27.81
Cost of absenteeism	
per week	9,455,400
per year ²	463,314,600
<i>Overtime</i>	
Paid OT	
Nurses working paid overtime per week	36,900
Paid OT hours per week	259,800
Weighted average wage rate ³	28.19
Premium rate ⁴	1.5
Cost of overtime	
per week	10,985,643
per year	538,296,507
Unpaid OT	
Nurses working unpaid overtime per week	23,800
Unpaid OT hours per week	90,000
Weighted average wage rate ⁵	28.24
Cost of overtime	
per week	2,541,600
per year	124,538,400
<p>¹ Wage rate is usual hourly wages, including bonuses, before taxes and other deductions for absent nurses. Wage rate is weighted by fraction of nurses reporting a given wage rate.</p> <p>² Assuming 49 weeks</p> <p>³ Weighted average wage rate for nurses working paid OT.</p> <p>⁴ Assuming OT is paid with a premium rate of 1.5</p> <p>⁵ Weighted average wage rate for nurses working unpaid OT</p> <p>Readers are urged to acknowledge the possible error estimates in their interpretation and use of findings. Estimates are based on broad assumptions about premium overtime rate.</p>	

Figure 2: Percentage Reporting Weekly Overtime, 2005 Annual Averages

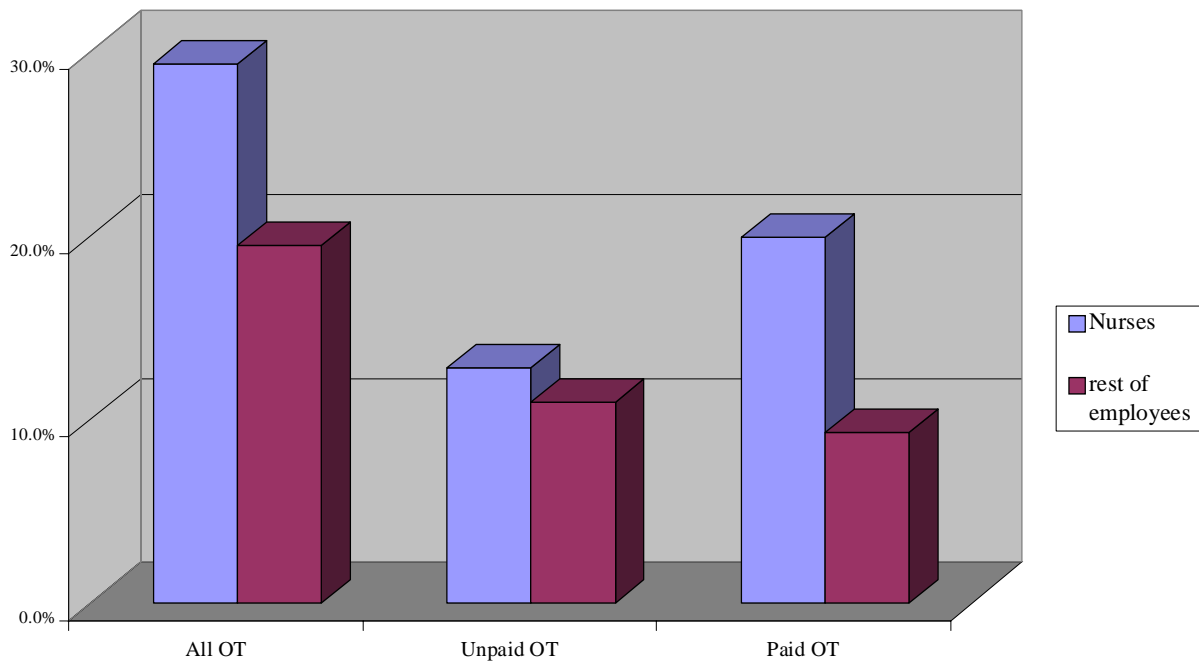


Figure 3: Seasonally Adjusted Absenteeism Rate among Canadian Publicly Employed Registered Nurses

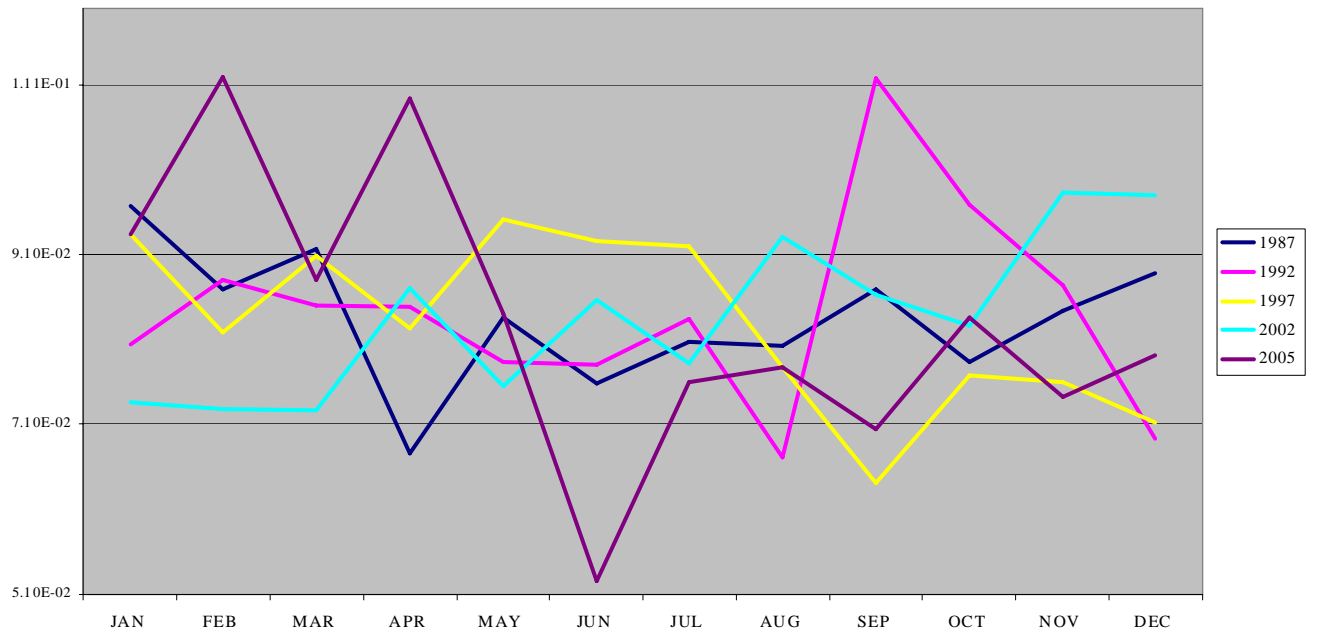


Figure 4 :Illness and Injury-Related Absenteeism among Publicly Employed Nurses - Seasonal Effects, Selected Years and 2006 forecast

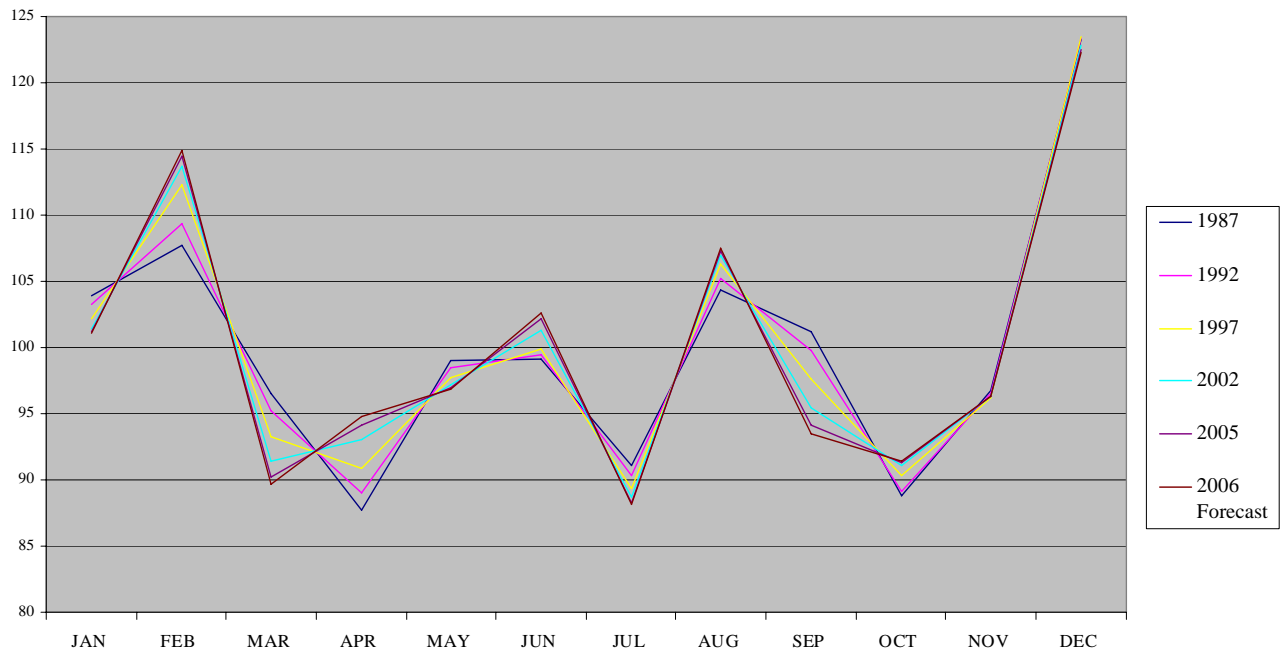


Figure 5: Average Absenteeism Rate 1987-2005 among Nursing Supervisors and Registered Nurses across Provinces

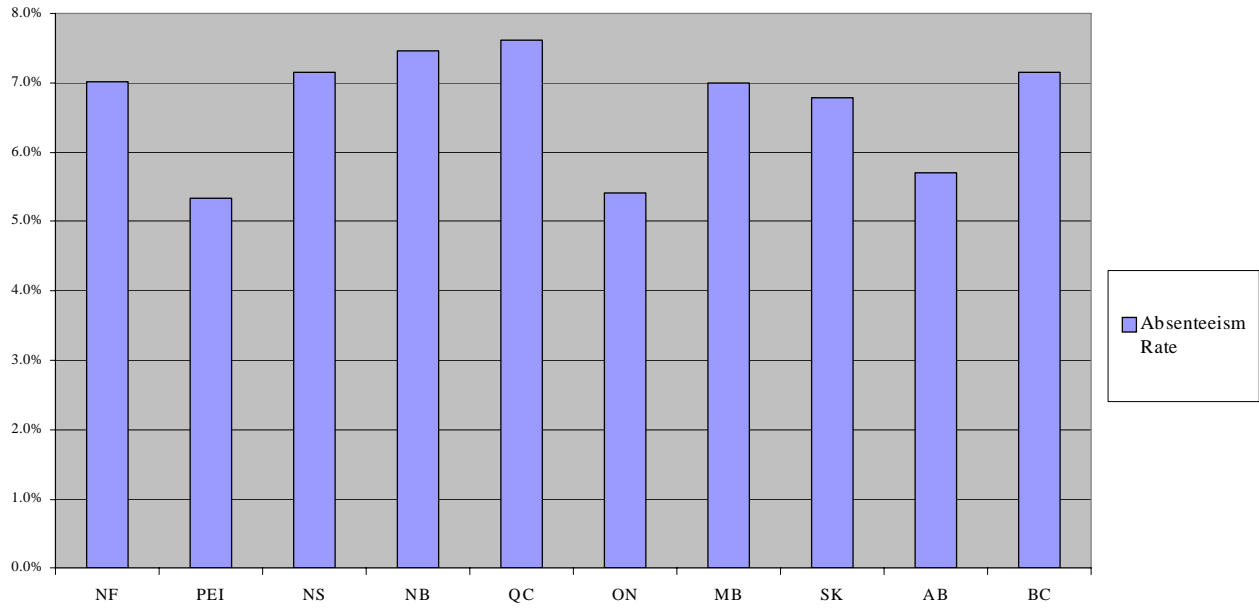


Figure 6: Illness and Injury-related Absenteeism Rate among Publicly Employed Nurses by Province, Selected Years

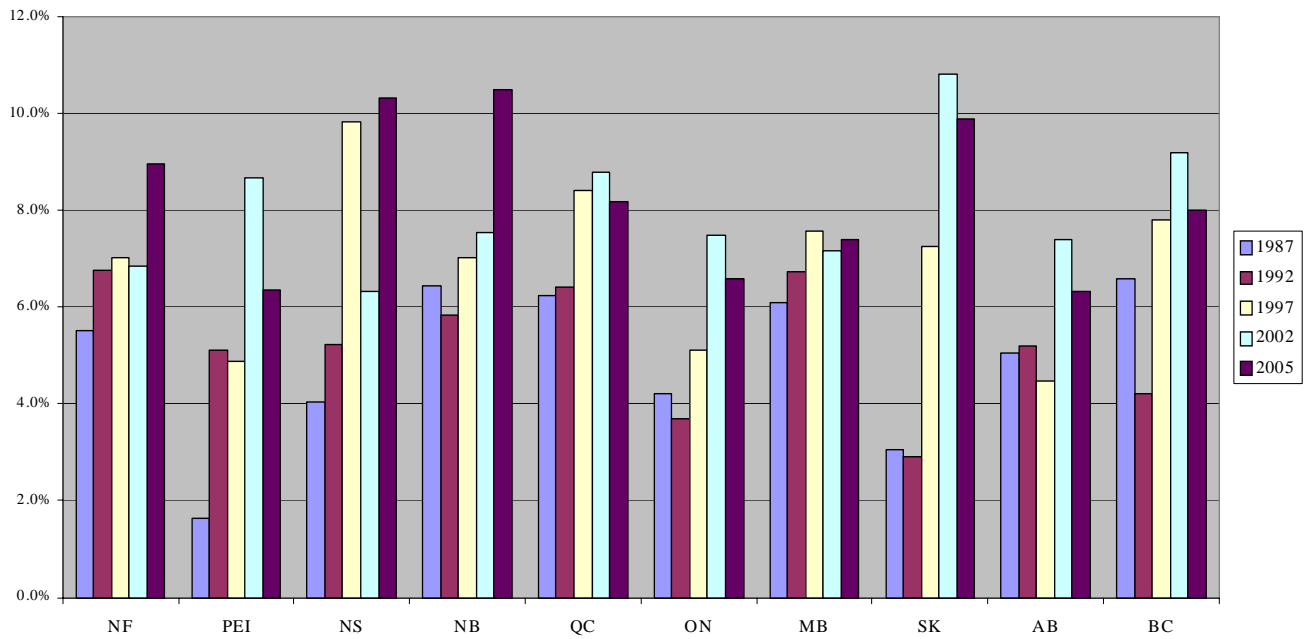


Figure 7: Overtime to Absenteeism Ratio, Publicly Employed Registered Nurses and Nursing Supervisors by Month, Canada, 2005

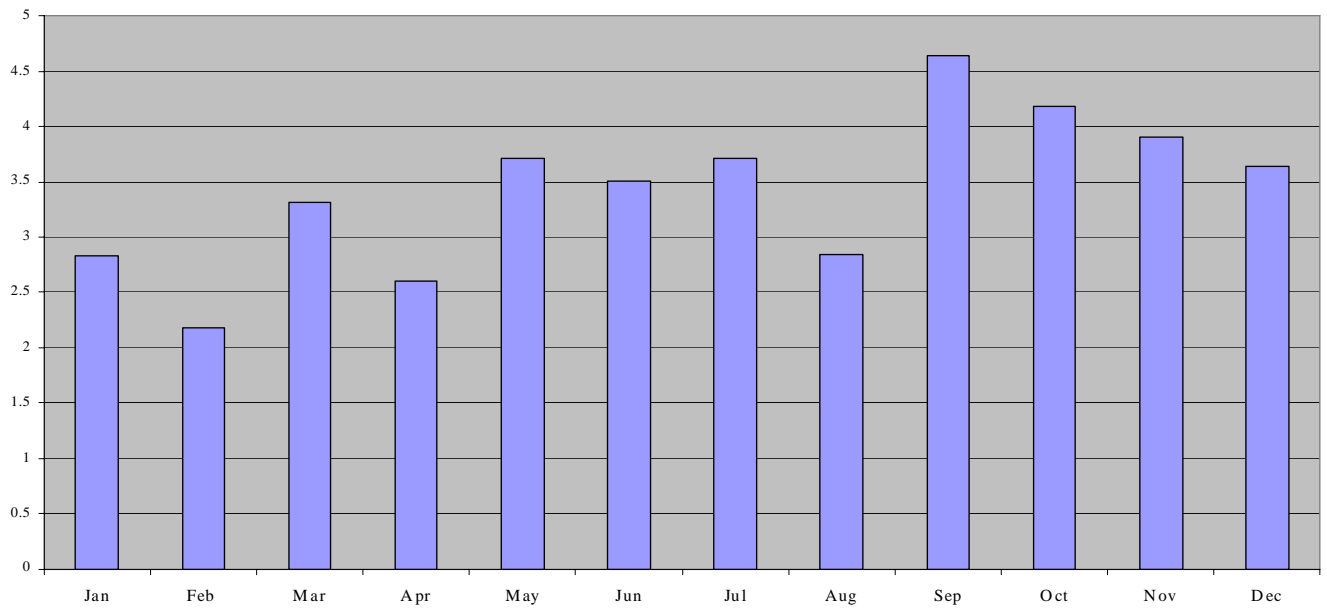
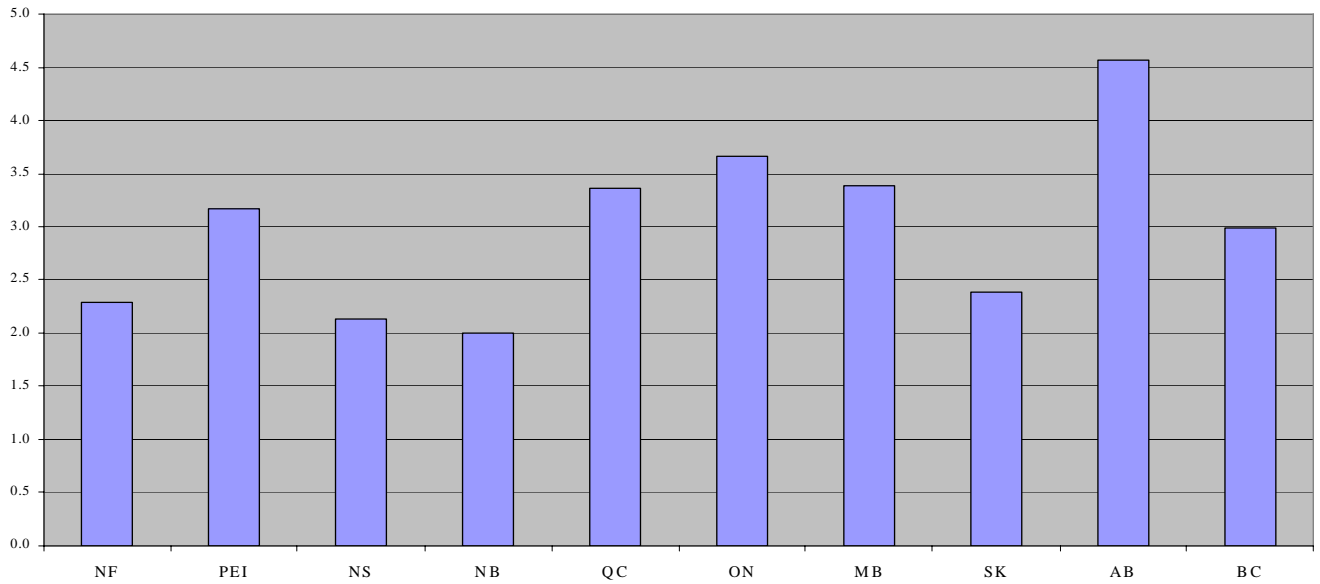
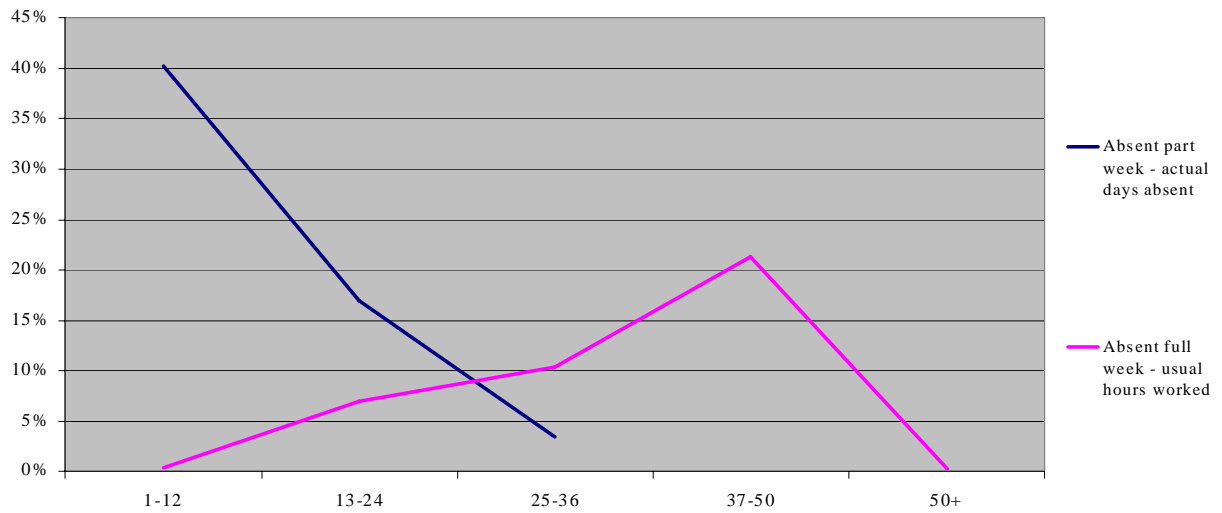


Figure 8: Overtime to Absenteeism Ratio, Publicly Employed Registered Nurses and Nurse Supervisors, by Province, 2005



**Figure 9: Duration of Time off in Percentage of Absent Publicly Employed Nurses, Full Week
Absence and Part-Week Absence in number of Hours, 2005**



References

Canadian Labour and Business Centre. (2003). *Trends in Illness and Injury-Related Absenteeism and overtime among Publicly employed Registered Nurses*. Ottawa, ON: Author.