

Trends in Own Illness or Disability-Related Absenteeism and Overtime among Publicly-Employed Registered Nurses

Summary of Key Findings

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EXECUTIVE SUMMARY

For a number of years, there has been a report detailing registered nurse and nurse supervisors' absenteeism and overtime. Informetrica Limited produced the previous report, commissioned in 2006 by the Canadian Nurses Association (CNA). In 2003, the Canadian Labour and Business Centre (CLBC) produced the report for the Office of Nursing Policy for Health Canada.

Informetrica Limited has updated this report to also include the latest year possible (2008) for the Canadian Federation of Nurses Unions. This report presents information about absenteeism and overtime of nurses for basic characteristics (full-time/part-time), age, and region where available. This report includes and expands on the previous reports' information.

Key Findings:

- There were, on average, 283.2 thousand nurse supervisors and registered nurses in the public and private sectors, and all industries in Canada in 2008. This was an increase of 13.5 thousand, or 5 per cent from 2005.
- Of the 283.2 thousand nurse supervisors and registered nurses in Canada, 238.3 thousand, or 84 per cent, were employed in the public sector, an increase of 16.6 thousand, or 7.5 per cent over 2005.
- When considering publicly employed nurse supervisors and registered nurses in the health and social assistance industry (public-sector health-care nurses), there were, on average, 232 thousand in 2008. This is an increase of about 7.7 per cent, or 16.6 thousand, more than in 2005.
- The absentee rate for public-sector health-care nurses from all causes is about 30 per cent. This weekly figure includes absences due to vacation and civic holidays. There was a 6.3 per cent increase in the average weekly number of absences after adjusting for the increase in the number of public-sector health-care nurses from 2005 to 2008.
- Absenteeism for public-sector health-care nurses due to own illness or disability was up in 2008 to 9.3 per cent from 7.6 per cent in 2005.
- On average, in each week in 2008, 10.1 per cent of public-sector health-care nurses who usually work at least 30 hours per week were absent due to own illness or disability, a 2.2 percentage point increase in the incidence from 2005. This was higher than all other health-care occupations in 2008.
- The overtime rate was up in 2008 to 31 per cent from 29.3 per cent in 2005. For paid overtime, the rate increased to 21.3 per cent in 2008 from 19.9 per cent in 2005. For unpaid overtime, the rate remained relatively constant at 12.9 per cent in 2008 compared to 12.8 per cent in 2005.

1 Introduction

This study is a continuation of previous studies that used the Labour Force Survey (LFS) to detail absenteeism and overtime of Nurse Supervisors and Registered Nurses. The Canadian Federation of Nurses Unions commissioned Informetrica Limited for the 2008 update.

This paper reports the following information for nurse supervisors and registered nurses who are publicly employed in the health-care and social assistance industry:

1. Absenteeism rates and reasons;
2. Overtime; and
3. Costs associated with absenteeism due to own illness or disability and overtime.

Further to the basic information stated above, these items are presented by province, unionization, full and part time (full time is defined by the LFS as 30 hrs or more per week), age and tenure. Seasonal patterns are discussed as well as possible characteristics that may be attributed to absenteeism.

1.1 Labour Force Survey

The LFS is a monthly survey of about 51 thousand households that reports detailed information about the Canadian labour market. It is a main source of Canadian employment data. The data presented in this report are for the ten provinces. The population, or coverage of the survey is:

In the provinces, the LFS covers 98% of the population. People living on First Nation reserves and Crown lands, residents of institutions and certain remote regions, as well as full-time members of the Canadian Forces are excluded from the survey target population.¹

Nurse supervisors and registered nurses who are not resident on a reservation or Crown land, member of the Canadian Forces, remotely located, or institutionalized are included in the LFS, and their data are presented in this report.

It is important to keep in mind that responses to the LFS are from a survey, and typically the “responses for household members are given by one well-informed member of the household”.² Due to that fact, it is reasonable to expect the information provided in the LFS, specifically pertaining to items such as unionization and number of employed nurses, to be different from administrative data.

¹ **Statistics Canada (2008):** *Methodology of the Canadian Labour Force Survey*, Statistics Canada Catalogue no. 71-526-X, June 2008, p. 6 <<http://www.statcan.gc.ca/pub/71-526-x/71-526-x2007001-eng.pdf>>, accessed 15 May 2009.

² *Ibid*, p. 40.

The questionnaire for the survey is readily available from the Statistics Canada Web-site, and is included in the *Guide to the Labour Force Survey* (Catalogue no. 71-543-G, pages 48 – 69; <http://www.statcan.gc.ca/pub/71-543-g/71-543-g2009001-eng.pdf>).

LFS terminology used in this report includes the reference week. The reference week is the week of the survey. Typically, this is sometime around the 15th of the month. Households that are participants of the survey remain in the sample for six months.³ Usually, about 9 thousand households are added each month.⁴

LFS data presented in this report are consistent with the data used and presented in the previous reports, most recently from 2006. It is important to note the data presented for 2002, 2005 and 2008 are based on 2001 census weights, and are different from the data presented for 1987, 1992 and 1997.

In 1999 the LFS changed how it defines public and private employees to be consistent with the System of National Accounts.⁵ This change resulted in significantly more hospital workers becoming public employees. This is evident in the data from 1997 and 2002, presented in Table 1e(i). The reader should be aware of the change in concept when viewing levels data presented in this paper. However, rates and incidences regarding absenteeism and overtime are not affected to the same extent. The additional public health-care workers presented in tables after 1997 are, for the most part, nurses who work in hospitals.⁶ Thus, a larger proportion of the population is shift-workers in hospitals that have a higher incidence of absenteeism, thus affecting the results presented (even the rates over time).

The break in the data reported in this paper is due to our using the same data as in previous studies whereas Statistics Canada revises the LFS data when changes to methodologies or census weights occur.

³ Ibid, P.40.

⁴ Ibid, P.41.

⁵ **Statistics Canada (2006):** *Improvements in 2006 to the Labour Force Survey (LFS)*, Statistics Canada Catalogue no. 71F0031XIE – no. 003, P. 6, <<http://www.statcan.gc.ca/pub/71f0031x/71f0031x2006003-eng.pdf>>, accessed 1 May 2009.

⁶ Ibid, P. 7.

2 Methodology

All data and information presented in this report are from Statistics Canada's Public Use Microdata Files (PUMF) for the LFS.⁷ Years presented in this report are 1987, 1992, 1997, 2002, 2005 and 2008. All months were used for all years, and weekly averages are typically reported in the data tables. All initial analysis was completed with Stata8, with tables and figures generated within Microsoft Excel, and seasonal adjustments were completed in MOSAIC, Informetrica's proprietary software.

The data reported by occupation are:

- Occupation classifications for 2002, 2005 and 2008 are from the National Occupation Classification for Statistics, 2001 (NOC-S, 2001).
- The occupations for the years 1987, 1992 and 1997 are based on the 1991 Standard Occupational Classification (SOC-S, 1991).
- Occupations included in the NOC-S reported in this paper for health-care occupations are included in the Appendix.

Industry information for all years reported in this paper is from the North American Industry Classification System (NAICS 2002). Most of the results are based on the Health Care and Social Assistance industry (NAICS 62). Nurse supervisors and registered nurses (NOC-S2001 D1) who work in a publicly-funded workplace will be referred to as "public-sector health-care nurses" throughout this report.

Due to the detail of data being analyzed, sample size of the weighted data was taken into consideration. The minimum sample size reported, based on Statistics Canada suppression rules, for levels was 25 (possibly higher if the data were not reasonable), and for ratios or rates presented, a numerator of sample size no less than 5 (in many cases this was increased to 25), and a denominator of sample size no less than 100.⁸

The number of hours one usually works is the basis for determining if one is a full- or part-time employee. The LFS standard for full-time employee is one who usually works 30 or more hours per week. This definition of full- and part-time employee is used throughout this study. A distribution was run to see if the usual hours worked by public-sector health-care nurses across all ten provinces were consistent with the LFS standard. About 21.4 per cent of nurses worked less than 30 hours per week in 2008, and there were 5.8 per cent of all nurses reporting that they worked 30 hours per week. There was also no definitive consistency across provinces regarding usual hours worked. Therefore, the hours used to determine full- and part-time hours used in this paper were kept consistent with Statistics Canada standards.

⁷ Microdata are from **Statistics Canada: Labour Force Survey Microdata File**, Statistics Canada Catalogue no. 71M0001XCB.

⁸ **Statistics Canada (2008): Incomes in Canada, 2006**, Statistics Canada Catalogue no. 75-202-X, June 2008, P. 136 <<http://www.statcan.gc.ca/pub/75-202-x/75-202-x2006000-eng.pdf>>, accessed 1 May 2009.

Absences reported are based on survey response items that specify if one was absent the entire reference week (see definition in glossary or section 1.1 *Labour Force Survey*) or if they had lost hours of work during the reference week. Reasons why persons missed work were taken into consideration throughout this study, and most information presented here regarding absences is based on those due to own illness or disability.

When analyzing absenteeism, all 12 monthly LFS surveys for each of the calendar years 1987, 1992, 1997, 2002, 2005 and 2008 were used to produce annual estimates. It was assumed the absentees reported in each reference week were indicative of that month's absences. The aggregate hours lost due to own illness or disability was calculated by "using the formula: (aggregate lost hours in the survey reference week \div 7 days) \times the number of days in the survey month".⁹ When respondents reported full-week absences, their usual hours worked were used to determine hours lost, and for those who were present at work for part of the reference week, their LFS value for "hours lost" was used. The cost of absenteeism was simply the weighted average wage rate of those who were absent during the reference week, multiplied by aggregate hours absent, or the number of hours absent per week.

Overtime hours worked reported in the LFS include paid and unpaid overtime for data reported here after 1992. It is possible for a respondent of the survey to have both paid and unpaid overtime hours, and there is no double counting when reporting the aggregate number of individuals who have both paid and unpaid overtime. Note that overtime in the LFS is defined as "the number of hours worked during the reference week in excess of the usual hours reported in main job" divided by those present during the Reference Week.¹⁰ It was assumed 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. Based on the 2003 Report:

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.¹¹

When determining the cost of overtime, a premium wage rate of 1.5 (or "time and a half") was assumed in the calculation.

The LFS asks the respondents if they are unionized, or covered by a collective bargaining agreement. Note that since the LFS is a survey and self-reported, it may not reflect the administrative data for unionization.

⁹ Same methodology from 2003 Report, **Canadian Labour and Business Centre (2003)**: "Trends in Illness and Injury-Related Absenteeism and Overtime Among Publicly Employed Registered Nurses", Report commissioned for the Office of Nursing Policy, Health Canada, Ottawa, ON. P 2.

¹⁰ **Statistics Canada (2009)**: *Guide to the Labour Force Survey, 2009*, Statistics Canada Catalogue no. 71-543-G, P. 14 <<http://www.statcan.gc.ca/pub/71-543-g/71-543-g2009001-eng.pdf>>, accessed 1 May 2009.

¹¹ **Canadian Labour and Business Centre (2003)**, P.3.

It is possible that the trends in the absenteeism of public-sector health-care workers are based on time of year. The time of year was considered as a possible indicator of higher rates of absenteeism, and that was estimated by using a seasonal adjustment process on the data (X11), and also by regressing monthly absentee rates against the months of the year. Also, preliminary work using the microdata in the LFS was used to determine if one's province, family characteristics, or unionization had any influence on the incidence of being absent due to own illness or disability.

3 Results

3.1 Nurse Supervisors and Registered Nurses

Table 1a: Registered Nurses and Nurse Supervisors in Canada, 2008

	Total	Age				
		<35 yrs	35-44 yrs	45-49 yrs	50-54 yrs	55+ yrs
All Nurses [1]						
Total	283,200	76,900	66,800	40,700	43,700	55,100
Full-time hours [2]	216,100	62,600	50,400	31,100	35,500	36,500
Part-time hours [3]	67,100	14,400	16,400	9,600	8,300	18,600
Private-Sector Nurses [4]						
Total	44,900	9,300	10,000	7,400	5,900	12,400
Full-time hours	29,100	6,700	6,900	4,800	4,200	6,400
Part-time hours	15,900	2,600	3,100	2,600	1,600	6,000
Public-Sector Nurses [5]						
Total	238,300	67,600	56,800	33,400	37,800	42,700
Full-time hours	187,000	55,800	43,500	26,300	31,200	30,100
Part-time hours	51,300	11,800	13,300	7,000	6,600	12,600
Public-Sector Health-Care Nurses [6]						
Total	232,000	66,000	55,500	32,400	36,900	41,300
Full-time hours	182,000	54,600	42,500	25,400	30,300	29,300
Part-time hours	50,000	11,400	13,100	6,900	6,600	12,000
Distribution working FT/PT						
Full-time hours	78.4%	82.7%	76.5%	78.6%	82.1%	70.9%
Part-time hours	21.6%	17.3%	23.5%	21.4%	17.9%	29.1%

[1] Nurses: 2008, all persons who are employed as a Nurse Supervisor or RN (2001 NOCS_47, Occupation number 14).

[2] Full-time hours, individual usually works 30.0 hours per week or more.

[3] Part-time hours, individual usually works less than 30.0 hours per week.

[4] Nurses who are employed by a private organization.

[5] Nurses who are employed in the public sector.

[6] Nurses who are employed in the public sector and who are in the Health Care and Social Assistance industry (2002 NAICS_43, Industry number 37).

Source: Special tabulation of Statistics Canada's Labour Force Survey Public Use Microdata Files (LFS PUMF), selected years, by Informetrica Limited

- In 2008, there were, on average each week, 283.2 thousand Nurse Supervisors and Registered Nurses (nurses) in Canada.
- Of the 283.2 thousand nurses, 232 thousand were employed in the public sector in the Health Care and Social Assistance industry (public-sector health-care nurses).
- In 2008, 78.4 per cent of public-sector health-care nurses worked full-time, or at least 30 hours per week.

Table 1b(i): Registered Nurses and Nurse Supervisors in Canada, by Province, 2008

	All Nurses	Private-Sector Nurses	Public-Sector Nurses	Public-Sector Health-Care Nurses
Newfoundland	5,900	4.8%	95.2%	93.0%
Prince Edward Island	1,700	6.8%	93.2%	84.0%
Nova Scotia	8,700	14.8%	85.2%	83.0%
New Brunswick	8,500	10.6%	89.4%	87.1%
Québec	66,800	18.2%	81.8%	81.0%
Ontario	100,600	21.7%	78.3%	75.7%
Manitoba	12,700	4.8%	95.2%	92.8%
Saskatchewan	9,400	6.7%	93.3%	88.9%
Alberta	32,300	9.1%	90.9%	86.3%
British Columbia	36,700	11.4%	88.6%	87.8%
Sum of Provinces	283,200	16%	84%	82%
Atlantic	24,800	10.5%	89.5%	86.8%
Québec	66,800	18.2%	81.8%	81.0%
Ontario	100,600	21.7%	78.3%	75.7%
Prairies	54,300	7.7%	92.3%	88.3%
British Columbia	36,700	11.4%	88.6%	87.8%

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- In 2008, 82 per cent of all nurses were employed publicly and worked in the Health Care and Social Assistance industry.
- Ontario and Quebec, the two most populous provinces in Canada, have the most nurses.
- Newfoundland and Labrador and Manitoba have the highest proportion of nurses working in the public sector of all the provinces.
- Ontario had the lowest rate of public-sector nurses of all provinces in 2008.

Table 1b(ii): Public-Sector Health-Care Nurses, by Province, 2008

	Public-Sector Health-Care Nurses	Full-time Hours [1]	Part-time Hours [2]
Newfoundland	5,400	86.6%	13.4%
Prince Edward Island	1,400	81.5%	18.5%
Nova Scotia	7,200	78.5%	21.5%
New Brunswick	7,400	87.2%	12.8%
Québec	54,200	76.0%	24.0%
Ontario	76,100	81.0%	19.0%
Manitoba	11,800	73.2%	26.8%
Saskatchewan	8,300	81.0%	19.0%
Alberta	27,900	70.2%	29.8%
British Columbia	32,300	81.2%	18.8%
Sum of Provinces	232,000	78.4%	21.6%

[1] Full-time Hours, individual usually works 30.0 hours per week or more.

[2] Part-time Hours, individual usually works less than 30.0 hours per week.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- Compared to the other provinces, Alberta and Manitoba had the largest proportion of public-sector health-care nurses working less than 30 hours per week.
- New Brunswick and Newfoundland had the largest proportion working at least 30 hours per week in 2008.

Table 1c: Nurses by Industry, 2008 [1]

Industry	Total	Private-Sector Nurses			Public-Sector Nurses		
		Total	Full-time	Part-time	Total	Full-time	Part-time
All Industries with Nurses	283,200	44,900	29,100	15,900	238,300	187,000	51,300
Health Care and Social Assistance [2]	270,000	37,900	24,500	13,500	232,000	182,000	50,000
Government Administration [3]	5,400	n/a	n/a	n/a	5,400	4,400	1,100
Other [4]	7,900	7,000	4,600	2,400	900	700	-

[1] These data are self-reported by respondents to the Labour Force Survey and are not directly comparable to Administrative Data.

[2] 2002 NAICS_43 Item number "37", Health Care and Social Assistance.

[3] 2002 NAICS_43 Item number "41" through "43", note LFS includes only all provinces, civilians, and those not living on reservations.

[4] All other Industries that employ nurses and are not industries numbered: 37, 41, 42, 43.

"n/a" - implies zero observations

"-" - sample size exclusion

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- The dominant industry employing Registered Nurses and Nurse Supervisors is the Health Care and Social Assistance industry.

Table 1d: Unionization of Public-Sector Health-Care Nurses, by Province, 2008 [1]

	Public-Sector Health-Care Nurses	Union member	% Union member	Not member, covered by collective agreement	Not member or covered by collective agreement
Newfoundland	5,400	4,900	91%	-	500
Prince Edward Island	1,400	1,400	97%	-	-
Nova Scotia	7,200	6,200	85%	-	1,000
New Brunswick	7,400	6,600	89%	-	600
Québec	54,200	49,900	92%	1,000	3,300
Ontario	76,100	58,600	77%	1,200	16,400
Manitoba	11,800	10,900	93%	-	800
Saskatchewan	8,300	7,800	94%	-	500
Alberta	27,900	24,000	86%	500	3,300
British Columbia	32,300	28,000	87%	-	3,300
Sum of Provinces	232,000	198,300	85%	4,200	29,600
Atlantic	21,500	19,100	89%	300	2,100
Québec	54,200	49,900	92%	1,000	3,300
Ontario	76,100	58,600	77%	1,200	16,400
Prairies	48,000	42,700	89%	700	4,500
British Columbia	32,300	28,000	87%	-	3,300

[1] These data are self-reported by respondents to the Labour Force Survey and are not directly comparable to Administrative "-" - sample size exclusion

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- In 2008, the unionization rate for public-sector health-care nurses in Prince Edward Island was 97 per cent, and for Ontario, it was 77 per cent.
- The majority of public-sector health-care nurses who are not unionized are not covered by a collective bargaining agreement.

Table 1e(i): Registered Nurses and Nurse Supervisors in Canada, Selected Years

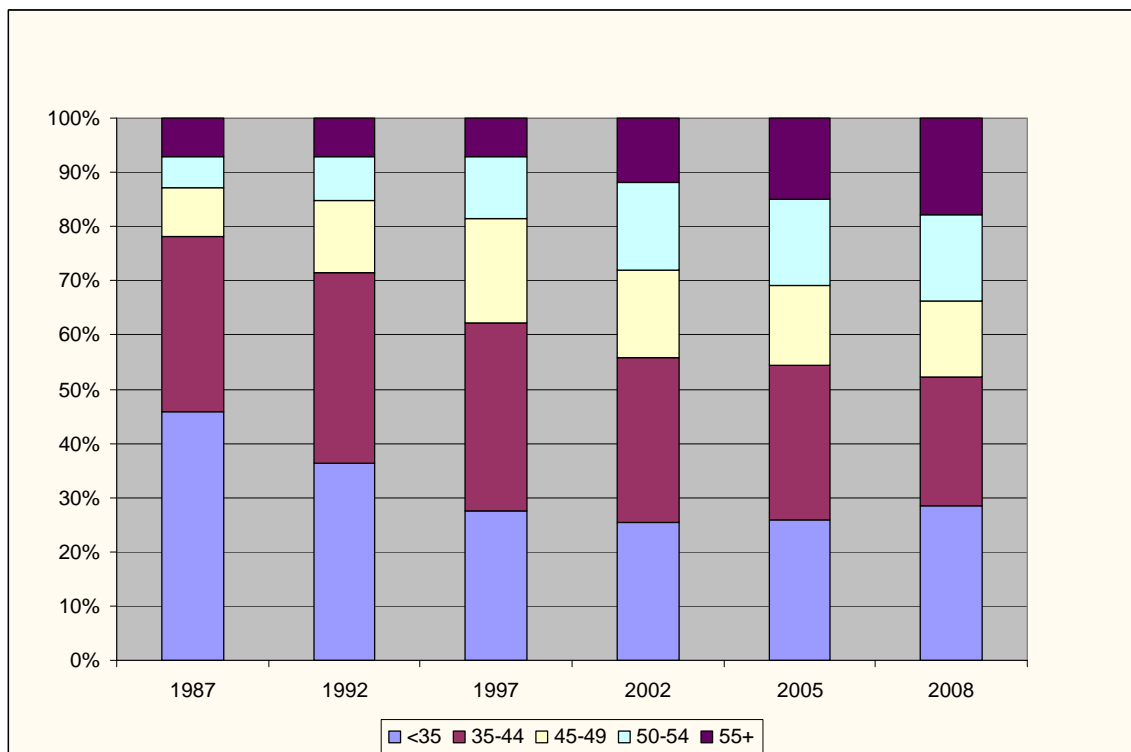
	1987	1992	1997	2002	2005	2008
All Nurses	222,800	232,200	225,600	265,600	269,700	283,200
All Public-Sector Nurses	181,600	188,400	178,000	219,200	221,800	238,300
All Public-Sector Health-Care Nurses	175,300	182,500	172,400	215,700	215,500	232,000
Full-time	125,700	128,400	120,500	161,400	162,700	182,000
Part-time	49,700	54,100	51,900	54,300	52,800	50,000
<i>Public-Sector Health-Care Nurses by Age</i>						
<35	80,200	66,400	47,600	55,000	55,700	66,000
35-44	56,700	64,000	59,800	65,200	61,300	55,500
45-49	15,900	24,100	33,200	34,900	32,100	32,400
50-54	10,100	15,100	19,300	34,800	34,300	36,900
55+	12,400	12,900	12,500	25,700	32,100	41,300
<i>Public-Sector Health-Care Nurses, Full-time hours, by age</i>						
<35	55,800	47,200	30,900	43,500	42,600	54,600
35-44	40,600	44,000	40,900	46,500	45,900	42,500
45-49	13,100	16,800	24,200	25,700	23,800	25,400
50-54	7,200	11,900	15,100	27,500	27,300	30,300
55+	8,900	8,600	9,400	18,100	23,000	29,300

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- Over time, there has been increasing numbers of public-sector health-care nurses over the age of 50.

Figure 1: Age Distribution of Public-Sector Health-Care Nurses, Selected Years



Source: Special tabulation of Statistics Canada's Labour Force Survey Public Use Microdata Files (LFS PUMF), selected years, by Informetrica Limited

- Despite the increase in the per cent of nurses 50 years of age and older, there is a relative decrease in the percentage of nurses aged 45 to 49 years over time.
- There are fewer, proportionately, nurses aged less than 50 in 2008 than in all previous years presented in the figure above.

Table 1e(ii): Registered Nurses and Nurse Supervisors in Canada, by Gender, Selected Years

	1987	1992	1997	2002	2005	2008
All Nurses	222,800	232,200	225,600	265,600	269,700	283,200
Female	204,800	217,000	212,400	246,400	252,400	263,200
Male	18,000	15,200	13,300	19,200	17,300	20,100
All Public-Sector Nurses	181,600	188,400	178,000	219,200	221,800	238,300
Female	165,100	175,600	166,600	202,300	206,200	222,600
Male	16,400	12,800	11,500	16,900	15,600	15,700
All Public-Sector Health-Care Nurses	175,300	182,500	172,400	215,700	215,500	232,000
Female	159,300	170,200	161,900	199,100	200,100	216,800
Male	16,000	12,300	10,500	16,600	15,400	15,200

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- Approximately 93 per cent of nurses are female. This is a consistent finding in all years except 1987 as shown in the table above. In 1987, 91 per cent of public-sector nurses were female.

Table 1e(iii): Registered Nurses and Nurse Supervisors in Canada, Usual Hours Worked per Week, Selected Years

Public-Sector Health-Care Nurses	1987	1992	1997	2002	2005	2008
Total usual hours worked per week	68,732,200	71,218,600	66,246,500	86,262,500	86,221,200	94,203,500
Full-time	56,946,800	57,915,100	53,425,400	72,168,400	72,824,000	81,749,300
Part-time	11,785,400	13,303,500	12,821,100	14,094,200	13,397,200	12,454,200
Total usual hours worked per year	298,791,300	309,466,900	287,912,900	375,042,300	374,572,300	409,364,600
Full-time	247,610,900	251,650,500	232,244,700	313,753,300	316,365,900	355,264,500
Part-time	51,180,400	57,816,500	55,668,200	61,289,000	58,206,400	54,100,100
Present during reference week, usual hours worked per week	59,704,200	62,325,000	56,583,400	75,058,500	74,310,200	79,913,000
Full-time	49,340,000	50,613,400	45,725,700	62,966,000	62,822,500	69,241,800
Part-time	10,364,200	11,711,700	10,857,600	12,092,500	11,487,700	10,671,100
Present during reference week, usual hours worked per year	259,378,900	270,738,700	245,798,200	326,210,000	322,764,300	347,118,700
Full-time	214,406,300	219,856,300	198,667,100	273,644,900	272,866,100	300,770,500
Part-time	44,972,500	50,882,400	47,131,100	52,565,100	49,898,200	46,348,300

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- In 2008, there were more public-sector health-care nurses who usually worked at least 30 hours per week than in 2005, and fewer who work less than 30 hours per week.

Table 1e(iv): Registered Nurses and Nurse Supervisors in Canada, Selected Years

Public-Sector Health-Care Nurses	1987	1992	1997	2002	2005	2008
Total FTEs	164,805	170,693	158,805	206,863	206,604	225,794
Full-time	136,575	138,803	128,100	173,058	174,499	195,954
Part-time	28,230	31,890	30,705	33,805	32,105	29,840
Present during reference week, FTEs	143,066	149,332	135,575	179,928	178,028	191,461
Full-time	118,261	121,267	109,579	150,935	150,505	165,897
Part-time	24,806	28,065	25,996	28,993	27,522	25,564

[1] Assuming one FTE is equal to 1813 hours per year.

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- The table above shows the full-time-equivalence (FTE) of public-sector health-care nurses.

Table 1e(v): Public-Sector Health-Care Nurses, by Province, Selected Years

	1987	1992	1997	2002	2005	2008
Newfoundland	2,600	3,600	4,100	5,700	4,600	5,400
PEI	700	700	900	1,100	900	1,400
Nova Scotia	5,500	7,400	6,100	6,000	7,100	7,200
New Brunswick	5,100	6,400	5,700	7,200	6,800	7,400
Quebec	59,400	58,000	47,300	51,800	60,600	54,200
Ontario	56,100	57,000	55,000	77,100	67,600	76,100
Manitoba	7,300	7,200	7,800	9,100	9,900	11,800
Saskatchewan	5,600	6,400	6,000	6,300	8,200	8,300
Alberta	14,300	14,300	14,600	23,600	23,100	27,900
British Columbia	18,600	21,500	25,000	27,800	26,800	32,300
Sum of Provinces	175,300	182,500	172,400	215,700	215,500	232,000
Atlantic	14,000	18,200	16,800	20,000	19,300	21,500
Québec	59,400	58,000	47,300	51,800	60,600	54,200
Ontario	56,100	57,000	55,000	77,100	67,600	76,100
Prairies	27,200	27,800	28,300	39,000	41,200	48,000
British Columbia	18,600	21,500	25,000	27,800	26,800	32,300

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- The table above shows the average weekly number of public-sector health-care nurses by province.

Table 1f: Public-Sector Health-Care Nurses, Average Tenure (Years) by Age Group, Selected Years

	1987	1992	1997	2002	2005	2008
Age	<u>Average Tenure, Years</u>					
<35	4.5	4.7	5.7	4.2	3.9	4.2
35-44	10.0	10.3	11.8	10.9	10.8	10.2
45-49	11.4	12.3	15.1	15.3	14.1	14.2
50-54	12.3	12.5	15.5	15.2	14.9	15.2
55+	15.6	14.7	14.7	15.3	14.3	15.7
Total	8.2	9.0	11.4	11.1	10.7	10.8

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- The average tenure of public-sector health-care nurses has been about 11 years since 1997.

3.2 Absenteeism

Table 2a(i): Distribution of Type of Absence by Selected Occupation, 2008 [1]

	Own Illness or Disability	Personal or Family Responsibilities	Vacation or Civic Holiday	Other [2]
Nurse Supervisors and Registered Nurses	29.5%	19.3%	45.7%	5.5%
Assisting Occupations in Support of Health Services	33.6%	19.8%	38.6%	7.9%
Technical and Related Occupations in Health	25.6%	19.4%	49.8%	5.2%
Professional Occupations in Health	16.1%	17.6%	60.3%	5.9%
Occupations in Protective Services	27.1%	13.6%	53.9%	5.4%
Professional Occupations in Natural and Applied Sciences	15.1%	15.2%	63.1%	6.6%
Labourers in Processing, Manufacturing and Utilities	31.8%	15.3%	43.7%	9.2%
Assemblers in Manufacturing	27.2%	13.9%	48.4%	10.5%
Construction Trades	20.1%	10.1%	45.9%	23.8%
Secretaries	21.2%	14.5%	58.1%	6.2%
All Occupations, excluding Nurse Supervisors and RNs	21.7%	15.0%	54.1%	9.2%

[1] Occupations listed and their labels are based on 2001 NOCS; all employed persons within occupation, including full- and part-time employees.

[2] Includes working short time.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- Assisting Occupations in Support of Health Services (see Appendix for this occupation definition) and Labourers in Processing, Manufacturing and Utilities have higher proportion of absenteeism due to own illness or disability than nurses.
- The occupations in Health Care shown above have a higher percentage of their total absences due to personal or family responsibilities than the other occupations listed above.
- Less than half of all absentees for nurses in 2008 were due to vacation or civic holiday. For all other occupations, 54.1 per cent of absences are due to vacation or civic holiday.

Table 2a(ii): Rate of Own Illness or Disability Related Absenteeism of Full-time Employees, Selected Occupations, Canada [1] [2]

	1987	1992	1997	2002	2005	2008
All Nurses						
Total Full-time Employees	154,600	159,800	152,900	193,900	198,700	216,100
Absent Full-time Employees	8,800	8,700	10,900	17,000	15,100	20,600
Rate of Absenteeism	5.7%	5.5%	7.1%	8.8%	7.6%	9.5%
Public-Sector Health-Care Nurses						
Total Full-time Employees	125,700	128,400	120,500	161,400	162,700	182,000
Absent Full-time Employees	7,400	7,400	9,200	14,300	12,900	18,300
Rate of Absenteeism	5.9%	5.7%	7.6%	8.9%	7.9%	10.1%
Assisting Occupations in Support of Health Services [3]						
Total Full-time Employees	77,100	98,200	114,900	165,900	194,800	222,400
Absent Full-time Employees	4,700	5,800	8,200	14,900	19,200	19,300
Rate of Absenteeism	6.1%	5.9%	7.1%	9.0%	9.8%	8.7%
Technical and Related Occupations in Health						
Total Full-time Employees	121,900	130,600	138,700	145,300	169,300	185,700
Absent Full-time Employees	5,600	6,300	7,600	8,800	13,100	13,700
Rate of Absenteeism	4.6%	4.8%	5.4%	6.1%	7.7%	7.4%
Professional Occupations in Health						
Total Full-time Employees	97,900	117,600	126,600	137,700	152,800	173,800
Absent Full-time Employees	1,100	2,400	2,200	3,200	4,000	5,300
Rate of Absenteeism	1.1%	2.1%	1.8%	2.3%	2.6%	3.1%
Occupations in Protective Services						
Total Full-time Employees	163,900	171,700	169,300	192,600	197,200	213,700
Absent Full-time Employees	7,300	7,600	7,000	9,400	12,200	12,600
Rate of Absenteeism	4.4%	4.4%	4.1%	4.9%	6.2%	5.9%
Professional Occupations in Natural and Applied Sciences						
Total Full-time Employees	305,800	341,000	459,100	519,800	573,800	633,700
Absent Full-time Employees	7,700	7,200	10,400	17,300	22,100	24,000
Rate of Absenteeism	2.5%	2.1%	2.3%	3.3%	3.8%	3.8%
Labourers in Processing, Manufacturing and Utilities						
Total Full-time Employees	179,900	180,100	211,900	174,100	191,500	155,000
Absent Full-time Employees	11,200	10,000	11,100	13,100	14,700	11,600
Rate of Absenteeism	6.2%	5.6%	5.2%	7.5%	7.7%	7.5%
Assemblers in Manufacturing						
Total Full-time Employees	205,600	170,900	232,200	238,800	211,100	183,600
Absent Full-time Employees	13,600	8,600	10,400	16,900	13,800	13,400
Rate of Absenteeism	6.6%	5.0%	4.5%	7.1%	6.5%	7.3%
Construction Trades						
Total Full-time Employees	285,400	225,700	257,300	297,000	325,200	383,400
Absent Full-time Employees	11,500	7,800	8,000	15,700	14,600	18,200
Rate of Absenteeism	4.0%	3.4%	3.1%	5.3%	4.5%	4.7%
Secretaries						
Total Full-time Employees	400,200	372,700	296,500	207,900	192,700	164,600
Absent Full-time Employees	15,000	13,800	11,700	10,500	11,400	10,800
Rate of Absenteeism	3.7%	3.7%	3.9%	5.1%	5.9%	6.6%
All Occupations [4]						
Total Full-time Employees	10,101,000	10,216,900	10,986,800	12,245,400	13,007,600	13,760,500
Absent Full-time Employees	360,300	330,100	376,300	588,000	658,000	708,400
Rate of Absenteeism	3.6%	3.2%	3.4%	4.8%	5.1%	5.1%

[1] Full-time, individual usually works 30.0 hours per week or more.

[2] Based on 2001 National Occupational Classification for 2002 forward, Based on 1991 Standard Occupation Classification for 1997 and earlier.

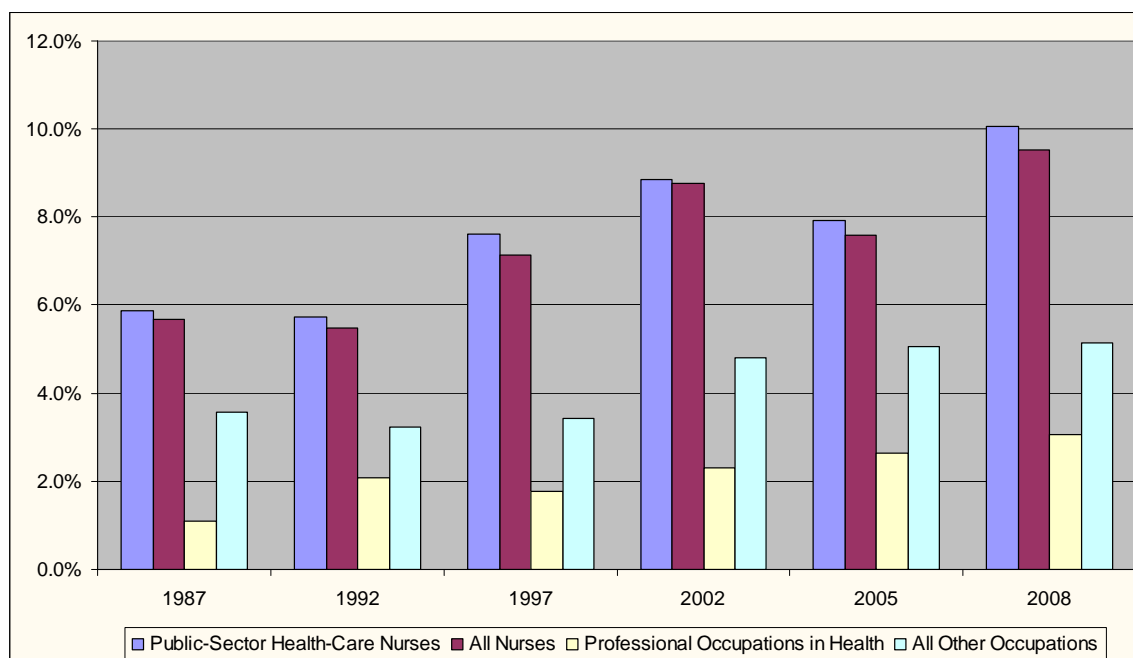
[3] Includes private sector employed Health Services providers.

[4] Except public and private sector Nurse Supervisors and Registered Nurses.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- Full-time public-sector health-care nurses have an absentee rate double that of all other occupations.
- In 2008, full-time public-sector health-care nurses had an absentee rate 2.2 percentage points higher than in 2005.
- Assisting Occupations in Support of Health Services also have a relatively high rate of absenteeism of 8.7 per cent in 2008.
- Other professional occupations in health care have an absentee rate of 3.1 per cent in 2008.

Figure 2: Rate of Own Illness or Disability-Related Absenteeism, Full-Time Employees, Selected Years



Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- “All other occupations” include “Professional Occupations in Health”.

Table 2b: Public-Sector Health-Care Nurses, by Selected Years

Public-Sector Health-Care Nurses	1987	1992	1997	2002	2005	2008
<i>absent per week</i>						
Total	41,000	41,600	39,400	59,100	60,400	69,200
Own illness or disability	9,400	9,200	11,700	17,400	16,500	21,500
Personal or family responsibilities	6,500	6,300	8,000	10,300	11,800	13,300
Vacation or civic holiday	22,900	22,200	17,300	28,400	28,100	31,100
Other [1]	2,300	3,800	2,500	3,100	4,000	3,300
<i>Rate of absence per week</i>						
Total	23.4%	22.8%	22.9%	27.4%	28.1%	29.8%
Own illness or disability	5.3%	5.0%	6.8%	8.1%	7.6%	9.3%
Personal or family responsibilities	3.7%	3.5%	4.6%	4.8%	5.5%	5.7%
Vacation or civic holiday	13.1%	12.2%	10.0%	13.1%	13.1%	13.4%
Other	1.3%	2.1%	1.4%	1.4%	1.9%	1.4%
Absent because of own illness or disability						
<i>by FT/PT hours</i>						
Total	9,400	9,200	11,700	17,400	16,500	21,500
Full-time	7,400	7,400	9,200	14,300	12,900	18,300
Part-time	2,000	1,800	2,600	3,100	3,500	3,200
<i>by FT/PT hours, rate</i>						
Total	5.3%	5.0%	6.8%	8.1%	7.6%	9.3%
Full-time	5.9%	5.7%	7.6%	8.9%	7.9%	10.1%
Part-time	4.0%	3.4%	5.0%	5.7%	6.7%	6.3%
<i>by age</i>						
Total	9,400	9,200	11,700	17,400	16,500	21,500
<35	4,000	3,400	3,100	4,500	4,100	4,700
35-44	3,000	3,400	3,700	5,400	4,100	5,500
45-49	800	1,000	2,300	2,400	2,400	3,000
50-54	700	600	1,800	3,100	3,000	3,200
55+	900	700	1,000	2,000	2,900	5,200
<i>by age, rate</i>						
Total	5.3%	5.0%	6.8%	8.1%	7.6%	9.3%
<35	5.0%	5.1%	6.4%	8.2%	7.3%	7.1%
35-44	5.4%	5.4%	6.1%	8.2%	6.7%	9.9%
45-49	4.8%	4.1%	6.8%	6.8%	7.5%	9.2%
50-54	7.0%	4.2%	9.2%	8.9%	8.8%	8.6%
55+	7.1%	5.8%	7.8%	7.9%	8.9%	12.5%
<i>Full-time hours, by age</i>						
Total	7,400	7,400	9,200	14,300	12,900	18,300
<35	3,200	2,800	2,300	4,000	3,200	4,200
35-44	2,300	2,800	2,800	4,200	3,500	4,500
45-49	700	700	1,800	2,100	1,700	2,600
50-54	-	500	1,400	2,400	2,300	2,600
55+	700	500	900	1,700	2,300	4,400
<i>Full-time hours, by age, rate</i>						
Total	5.9%	5.7%	7.6%	8.9%	7.9%	10.1%
<35	5.8%	6.0%	7.4%	9.1%	7.5%	7.7%
35-44	5.5%	6.3%	7.0%	9.0%	7.5%	10.6%
45-49	5.6%	4.4%	7.3%	8.0%	7.1%	10.2%
50-54	-	4.6%	9.1%	8.8%	8.4%	8.7%
55+	7.4%	5.7%	9.5%	9.2%	9.8%	15.0%

[1] Includes "working short-time".

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

"-" - sample size exclusion

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- In 2002, the overall rate of absence was 27.4 per cent; this includes all reasons for absences including vacation. In 2005 the overall absentee rate was 28.1 per cent, and in 2008 it was 29.8 per cent.
- All public-sector health-care care nurses younger than 35, or who are between 50 and 54 years, have had a decreasing rate of absenteeism since 2002 due to own illness or disability. However, full-time public-sector health-care nurses younger than 35 and those between 50 and 54 years of age had higher absentee rates due to own illness or disability in 2008 from 2005.

Table 2c: Rate of Absenteeism due to Own Illness or Disability of Public-Sector Health-Care Nurses, by Family Type, Selected Years

	1987	1992	1997	2002	2005	2008
<i>Unattached Individuals</i>	5.9%	6.5%	10.8%	9.2%	9.7%	11.8%
<35	7.8%	4.5%	7.0%	8.3%	5.6%	12.8%
35-44	-	11.7%	12.0%	-	17.6%	11.2%
45-49	-	-	-	-	-	-
50-54	-	-	-	-	15.0%	7.6%
55+	-	-	-	13.3%	-	15.4%
Families						
<i>All Families</i>	5.2%	4.8%	6.3%	7.9%	7.2%	8.9%
<35	4.3%	5.2%	6.3%	8.2%	7.8%	6.1%
35-44	5.5%	4.8%	5.4%	8.5%	5.5%	9.8%
45-49	5.3%	4.0%	5.9%	6.3%	7.2%	9.4%
50-54	7.8%	4.3%	8.2%	8.7%	7.5%	8.7%
55+	8.5%	4.9%	7.9%	6.8%	10.0%	11.8%
Selected Families						
<i>Husband-wife dual earner couple</i>						
Total	5.2%	4.1%	5.6%	7.6%	6.8%	7.8%
No children < 25	5.6%	5.2%	7.6%	9.6%	7.7%	6.9%
Youngest child < 18	5.2%	4.0%	5.1%	6.5%	6.1%	8.1%
Youngest child 18 to 24	-	-	4.5%	7.7%	7.7%	9.1%
<i>Husband-wife single earner couple</i>						
Total	4.9%	6.1%	8.1%	7.6%	6.2%	11.0%
No children < 25	-	6.8%	10.0%	6.1%	6.8%	13.5%
Youngest child < 18	-	5.5%	6.1%	11.7%	7.1%	9.6%
Youngest child 18 to 24	-	-	-	-	-	-
<i>Husband-wife single earner couple, wife employed</i>						
Total	4.8%	6.3%	8.5%	7.8%	6.7%	11.9%
No children < 25	-	7.0%	9.7%	6.5%	6.9%	13.7%
Youngest child < 18	-	6.1%	-	11.5%	-	11.0%
Youngest child 18 to 24	-	-	-	-	-	-
<i>Single-parent Families</i>						
Total	6.5%	11.5%	5.7%	9.8%	8.3%	12.6%
Parent employed, youngest child < 18	6.5%	11.1%	6.5%	9.0%	8.4%	11.4%
Parent employed, youngest child 18 to 24	-	-	-	12.7%	-	15.6%
<i>Other family types [1]</i>	-	-	-	8.3%	13.5%	11.5%
Those with children, age of youngest own child						
Youngest child under 3	3.8%	4.2%	5.5%	5.4%	5.4%	5.4%
Youngest child 3 to 5	6.2%	3.3%	4.9%	8.5%	8.7%	7.9%
Youngest child 6 to 12	5.4%	5.4%	5.5%	7.4%	6.2%	9.9%
Youngest child 13 to 15	-	5.1%	6.1%	7.5%	6.2%	11.2%
Youngest child 16 to 17	-	6.7%	3.9%	7.0%	7.8%	10.0%
Youngest child 18 to 24	6.2%	4.6%	5.0%	8.3%	7.8%	11.1%

[1] Not exhaustive, only representative of "Other Family Types", as detailed in the LFS.

"-" - sample size exclusion

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- The absentee rate by age presented for “all families” is based on the age of the public-sector health-care nurse living in the family.
- Unattached individuals younger than 35 had an increase in their rate of absences from 2005 to 2008. Unattached individuals aged 35 to 44 had a lower rate of absenteeism in 2008 than in 2005.
- Public-sector health-care nurses who are not unattached individuals typically have a lower incidence of absenteeism.
- Families that consist of a couple with both husband and wife employed had the lowest absentee rate by family type in 2008.
- Those with children less than 3 years of age typically have lower absentee rates than those with older children.

Table 2d(i): Absenteeism of Public Health Nurses by Unionization, Canada, 2008 [1]

Type of Absence	Public-Sector Health-Care Nurses		Not member, covered by	Not member or covered
	Union member	Union member	collective agreement	by collective agreement
Total	69,200	60,100	1,000	8,000
Own illness or disability	21,500	19,000	-	2,400
Personal or family responsibilities	13,300	12,300	-	900
Vacation or civic holiday	31,100	26,000	700	4,400
Other [2]	3,300	2,900	-	-
Distribution				
Total		86.9%	1.5%	11.6%
Own illness or disability		88.2%	-	11.0%
Personal or family responsibilities		92.1%	-	7.0%
Vacation or civic holiday		83.6%	2.3%	14.1%
Other		87.4%	-	-

[1] These data are self-reported by respondents to the Labour Force Survey and are not directly comparable to Administrative Data.

[2] Includes working short time.

"-" - sample size exclusion

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

Table 2d(i) presents the type of absence for public-sector health-care nurses by unionization in 2008. This table also shows the distribution of the type of absence by unionization to the total number absent. For example, 86.9 per cent of all absences of public-sector health-care nurses in 2008 were unionized. Note from Table 1d, in 2008, there were 85 per cent of public health-care workers in unions, while 13 per cent were not covered by a collective agreement.

- When observing absenteeism of public-sector health-care workers and unionization, there are slightly disproportionate more union members with own illness or disability-related absences (88.2 per cent of the total due to own illness or disability) than those who are not covered by a collective agreement (11.0 per cent of the total due to own illness or disability).

Table 2d(ii): Absentee Rate for Public-Sector Health-Care Nurses, by Union or Non-Union, 2008 [1]

Type of Absence	Union member			Non-union Member [2]		
	Total	Absent	Rate	Total	Absent	Rate
Total	198,300	60,100	30.3%	33,800	9,100	26.9%
Own illness or disability		19,000	9.6%		2,500	7.5%
Personal or family responsibilities		12,300	6.2%		1,100	3.1%
Vacation or civic holiday		26,000	13.1%		5,100	15.1%
Other		2,900	1.4%		-	-

[1] These data are self-reported by respondents to the Labour Force Survey and are not directly comparable to Administrative Data.

[2] Includes non-union members who may or may not be covered by a collective agreement.

"-" - sample size exclusion

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- The absentee rate for public-sector health-care nurses due to own illness or disability in 2008 was 9.6 per cent, and for those who are not a member of a union, it was 7.5 per cent.
- The absentee rate for non-union public-sector health-care nurses in 2008 due to vacation or civic holiday was 2.0 percentage points higher than for those who were unionized.

Table 3: Number of Hours Lost to Own Illness or Disability, Canada, Selected Years

	1987	1992	1997	2002	2005	2008
Public-Sector Health-Care Nurses	175,300	182,500	172,400	215,700	215,500	232,000
Full-time	125,700	128,400	120,500	161,400	162,700	182,000
Part-time	49,700	54,100	51,900	54,300	52,800	50,000
Absent Public-Sector Health-Care Nurses (per week)	9,400	9,200	11,700	17,400	16,500	21,500
Full-time	7,400	7,400	9,200	14,300	12,900	18,300
Part-time	2,000	1,800	2,600	3,100	3,500	3,200
Hours Absent per Absent Nurse (per week)						
Total	23.8	25.4	25.8	21.8	20.7	23.1
Full-time	25.8	27.4	28.2	23.0	22.2	24.7
Part-time	16.2	17.5	17.0	16.1	15.1	13.9
<i>Aggregate Hours of Work Absence due to own illness or disability</i>						
Hours lost per week						
Total	222,200	233,400	302,500	378,700	340,000	495,600
Full-time	190,400	201,500	258,800	329,200	286,300	451,600
Part-time	31,800	31,900	43,700	49,500	53,700	44,000
Hours lost per year						
Total	11,579,400	12,189,700	15,779,200	19,729,900	17,684,200	25,886,300
Full-time	9,923,800	10,522,200	13,499,400	17,152,000	14,891,900	23,587,400
Part-time	1,655,600	1,667,500	2,279,800	2,577,900	2,792,300	2,298,900
Full-time, Full-year Equivalent (per year) [1]	6,387	6,724	8,703	10,882	9,754	14,278
<i>Regained FTEs if Public-Sector Health-Care Nurses had other occupations full-time employees absentee rate</i>						
Regained FTEs [2] [3]	2,112	2,403	4,329	4,390	3,277	6,331

[1] 1992 calculation in this paper is different than in previous publications.

[2] Calculated by subtracting the number of lost FTE Public-Sector Health-Care Nurses if they had the same absentee rate as that for full-time employees of other occupations from the lost FTE value calculated for each year.

[3] Assuming one full-time, full-year equivalent job is equal to 1,813 hours per year.

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public sector and private sector health-care employees are different.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

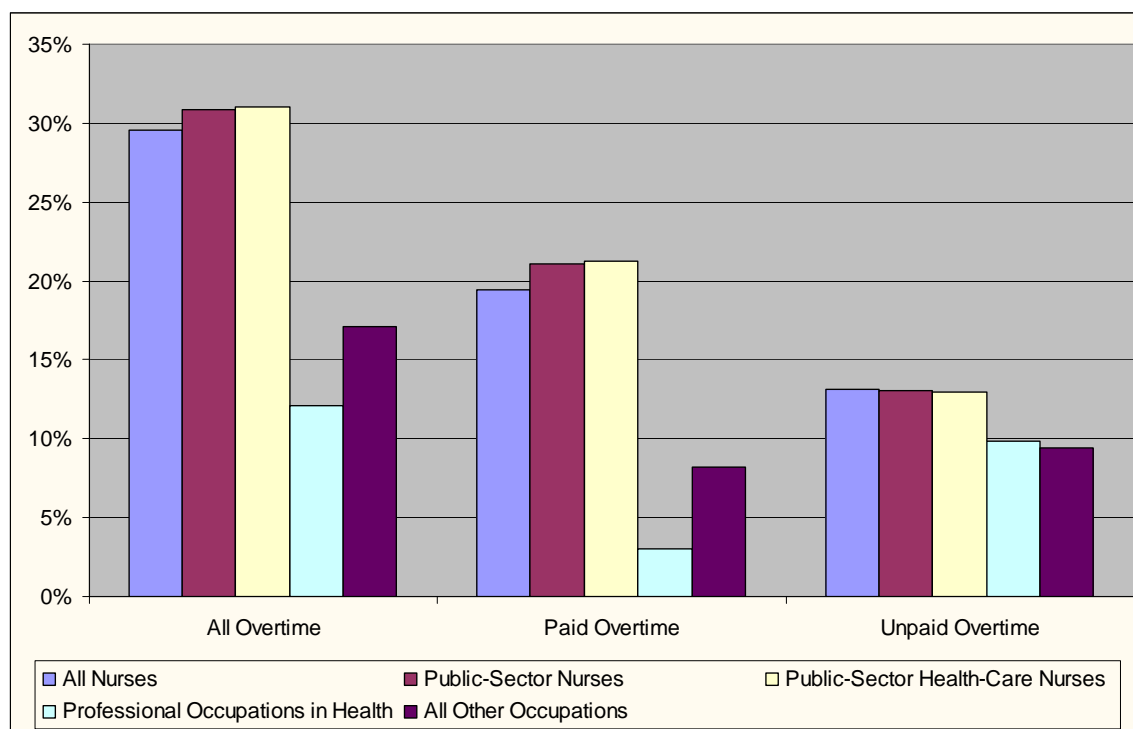
- Full-time public-sector health-care nurses who reported an absence missed, on average, 24.7 hours per week they were absent due to own illness or disability, while part-time employees missed 13.9 hours per week, on average.
- In 2008, there were a total of 14.3 thousand Full-Time Equivalent (FTE) public-sector health-care nurses absent.¹² This is an increase of 4.5 thousand from 2005, or 46 per cent. After adjusting for the increase in the number of nurses, there was a 34 per cent increase in FTE absenteeism due to own illness or disability.

¹² Full-Time Equivalent (FTE) was defined as 1,813 hours per year.

- If public-sector health-care nurses had the same absentee rate as those for full-time employees in all other occupations, there would have been 6.3 thousand FTE fewer absences in 2008.¹³

3.3 Overtime

Figure 3: Percentage of Nurses and All Other Employees Reporting Overtime, 2008, Annual Average



Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- “All other occupations” include “Professional Occupations in Health”.
- On average, slightly more than 30 per cent of public-sector health-care nurses reported working overtime hours in 2008.

¹³ Assumed there are 1,813 hours worked per year, per nurse. If this number were to be higher, the number of lost full-time equivalents would be lower.

Table 4a: Rate of Overtime for Employees Present during Reference Week, Selected Occupations, Canada [1]

	1987	1992	1997	2002	2005	2008
Nurse Supervisors and Registered Nurses						
With Overtime Hours	11.8%	10.6%	15.2%	25.9%	27.5%	29.6%
With Paid Overtime	n/a	n/a	8.6%	16.1%	17.7%	19.4%
With Unpaid Overtime	n/a	n/a	7.4%	12.5%	12.9%	13.2%
Public-Sector Health-Care Nurses						
With Overtime Hours	12.3%	10.4%	15.3%	26.7%	29.3%	31.0%
With Paid Overtime	n/a	n/a	9.0%	17.4%	19.9%	21.3%
With Unpaid Overtime	n/a	n/a	7.1%	11.8%	12.8%	12.9%
Assisting Occupations in Support of Health Services [2]						
With Overtime Hours	7.6%	6.6%	7.6%	10.7%	10.7%	12.1%
With Paid Overtime	n/a	n/a	4.9%	7.3%	7.8%	9.5%
With Unpaid Overtime	n/a	n/a	2.9%	3.7%	3.4%	3.1%
Technical and Related Occupations in Health						
With Overtime Hours	10.1%	9.6%	13.2%	17.3%	19.5%	20.7%
With Paid Overtime	n/a	n/a	7.8%	11.7%	13.9%	15.8%
With Unpaid Overtime	n/a	n/a	6.1%	6.8%	7.0%	6.4%
Professional Occupations in Health						
With Overtime Hours	7.3%	6.2%	9.7%	15.4%	12.8%	12.1%
With Paid Overtime	n/a	n/a	2.3%	3.2%	3.5%	3.0%
With Unpaid Overtime	n/a	n/a	7.8%	12.7%	10.0%	9.8%
Occupations in Protective Services						
With Overtime Hours	14.1%	12.4%	16.7%	23.5%	25.2%	27.6%
With Paid Overtime	n/a	n/a	11.8%	17.4%	19.2%	22.5%
With Unpaid Overtime	n/a	n/a	6.3%	8.4%	8.5%	8.1%
Professional Occupations in Natural and Applied Sciences						
With Overtime Hours	17.5%	16.3%	24.5%	28.8%	28.8%	25.9%
With Paid Overtime	n/a	n/a	8.6%	9.0%	8.2%	8.5%
With Unpaid Overtime	n/a	n/a	17.0%	21.0%	22.1%	18.7%
Labourers in Processing, Manufacturing and Utilities						
With Overtime Hours	13.3%	11.4%	16.5%	18.4%	18.9%	16.6%
With Paid Overtime	n/a	n/a	15.5%	17.8%	18.1%	15.9%
With Unpaid Overtime	n/a	n/a	1.1%	0.8%	1.0%	0.9%
Assemblers in Manufacturing						
With Overtime Hours	16.0%	13.8%	20.8%	23.2%	23.6%	21.2%
With Paid Overtime	n/a	n/a	19.0%	22.1%	22.5%	19.7%
With Unpaid Overtime	n/a	n/a	2.0%	1.5%	1.4%	1.8%
Construction Trades						
With Overtime Hours	9.5%	8.1%	9.4%	11.4%	13.2%	13.4%
With Paid Overtime	n/a	n/a	8.2%	10.0%	11.9%	12.1%
With Unpaid Overtime	n/a	n/a	1.4%	1.7%	1.7%	1.6%
Secretaries						
With Overtime Hours	8.7%	7.7%	10.5%	12.5%	11.3%	10.0%
With Paid Overtime	n/a	n/a	4.2%	5.2%	4.4%	3.8%
With Unpaid Overtime	n/a	n/a	6.7%	7.7%	7.3%	6.5%
All Occupations [3]						
With Overtime Hours	11.2%	9.9%	15.3%	19.2%	19.5%	18.7%
With Paid Overtime	n/a	n/a	7.3%	9.0%	9.2%	9.0%
With Unpaid Overtime	n/a	n/a	8.4%	10.9%	10.9%	10.3%

[1] Based on 2001 National Occupational Classification for 2002 forward, Based on 1991 Standard Occupation Classification for 1997 and earlier.

[2] Includes private-sector Health Service providers.

[3] Except public- and private-sector Nurse Supervisors and Registered Nurses.

- Paid and unpaid overtime hours are not available for the 1987 or 1992 LFS.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- Occupations in protective services and professional occupations in natural and applied sciences reported incidences of overtime hours of a similar magnitude as for nurse supervisors and registered nurses in 2008.
- The average weekly rate of total, paid, and unpaid overtime in every year since 1992 presented in the table above has increased for public-sector health-care nurses.

Table 4b(i): Incidence of Overtime for Public-Sector Health-Care Nurses by Age, Canada, Selected Years

	1987	1992	1997	2002	2005	2008
Public-Sector Health-Care Nurses	175,300	182,500	172,400	215,700	215,500	232,000
Those present during reference week	152,400	159,900	147,000	187,100	185,400	196,900
Those with overtime hours	18,700	16,700	22,600	49,900	54,400	61,000
Those with paid overtime hours	n/a	n/a	13,300	32,500	36,900	41,900
Those with unpaid overtime hours	n/a	n/a	10,400	22,200	23,800	25,500
By Age						
<35						
Public-Sector Health-Care Nurses	80,200	66,400	47,600	55,000	55,700	66,000
Those present during reference week	69,100	57,400	38,500	46,500	46,000	53,700
Those with overtime hours	9,000	6,200	6,000	11,300	12,100	16,000
Those with paid overtime hours	n/a	n/a	3,800	9,100	9,100	12,800
Those with unpaid overtime hours	n/a	n/a	2,500	3,600	4,600	4,500
35-44						
Public-Sector Health-Care Nurses	56,700	64,000	59,800	65,200	61,300	55,500
Those present during reference week	49,800	56,200	52,500	56,300	52,600	48,500
Those with overtime hours	6,200	6,900	7,900	15,300	16,300	15,100
Those with paid overtime hours	n/a	n/a	4,900	9,300	11,400	10,800
Those with unpaid overtime hours	n/a	n/a	3,400	7,400	6,600	6,100
45-49						
Public-Sector Health-Care Nurses	15,900	24,100	33,200	34,900	32,100	32,400
Those present during reference week	14,100	21,400	29,100	31,000	29,100	27,900
Those with overtime hours	1,700	1,700	4,500	7,800	9,700	7,600
Those with paid overtime hours	n/a	n/a	2,500	5,000	5,900	5,100
Those with unpaid overtime hours	n/a	n/a	2,200	3,400	4,900	3,800
50-54						
Public-Sector Health-Care Nurses	10,100	15,100	19,300	34,800	34,300	36,900
Those present during reference week	9,000	13,600	16,600	30,900	29,800	32,100
Those with overtime hours	800	900	2,900	9,600	9,100	10,600
Those with paid overtime hours	n/a	n/a	1,700	5,400	5,900	6,200
Those with unpaid overtime hours	n/a	n/a	1,400	5,100	4,400	5,300
55+						
Public-Sector Health-Care Nurses	12,400	12,900	12,500	25,700	32,100	41,300
Those present during reference week	10,400	11,300	10,400	22,400	27,900	34,700
Those with overtime hours	1,000	1,000	1,300	5,900	7,200	11,600
Those with paid overtime hours	n/a	n/a	400	3,600	4,600	7,100
Those with unpaid overtime hours	n/a	n/a	900	2,700	3,300	5,800

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

- Paid and unpaid overtime hours are not available for the 1987 or 1992 LFS.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- There were 29.8 per cent of public-sector health-care nurses in 2008 reporting overtime hours, a decrease of 2 percentage points from 2005 (31.8 per cent reported overtime hours). In 2002, 26.5 per cent of these nurses reported overtime hours; 3.4 percentage points less than in 2008.
- One-third of nurses aged 50 and older reported working overtime hours in 2008.

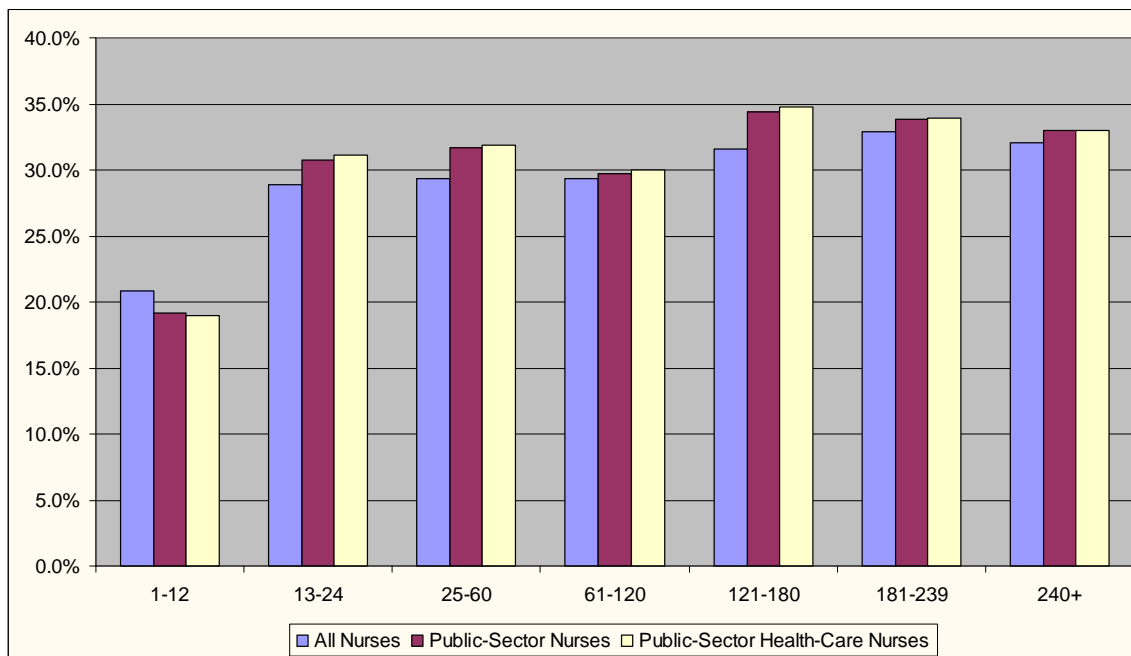
Table 4b(ii): Tenure (Months) and Overtime Hours, 2008

Tenure: Months	1-12	13-24	25-60	61-120	121-180	181-239	240+
All Nurses							
Total	29,600	24,900	46,200	58,500	26,100	29,800	68,000
Present During Reference Week	27,300	21,000	38,000	48,900	21,600	25,900	58,400
Report Overtime Hours	5,700	6,100	11,200	14,300	6,800	8,500	18,700
Rate	20.8%	28.9%	29.4%	29.3%	31.6%	32.9%	32.0%
Public-Sector Nurses							
Total	22,200	19,300	34,800	48,600	21,700	27,100	64,500
Present During Reference Week	20,000	16,300	28,800	40,400	17,900	23,600	55,200
Report Overtime Hours	3,800	5,000	9,100	12,000	6,100	8,000	18,200
Rate	19.2%	30.7%	31.7%	29.7%	34.4%	33.8%	33.0%
Public-Sector Health-Care Nurses							
Total	21,500	18,500	33,600	46,700	21,300	26,600	63,900
Present During Reference Week	19,400	15,600	27,900	38,800	17,500	23,100	54,600
Report Overtime Hours	3,700	4,800	8,900	11,600	6,100	7,800	18,000
Rate	19.0%	31.1%	31.9%	30.0%	34.8%	33.9%	33.0%

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- In 2008, when comparing the percentage of nurses reporting overtime hours, by tenure, those with at least 121 months (or 10 years) of employment with their current employer (at the time of the survey) typically work more overtime than those with less than 121 months of tenure.

Figure 4: Fraction of Public-Sector Health-Care Nurses Working Overtime by Job Tenure (Months), Canada, 2008



Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

Table 4c: Incidence of Overtime for Public-Sector Health-Care Nurses by Age, who were at work during the Reference Week, Canada, Selected Years, Rate

	1987	1992	1997	2002	2005	2008
Per cent with overtime	12.3%	10.4%	15.3%	26.7%	29.3%	31.0%
Per cent with paid overtime	n/a	n/a	9.0%	17.4%	19.9%	21.3%
Per cent with unpaid overtime	n/a	n/a	7.1%	11.8%	12.8%	12.9%
By Age						
<35						
Per cent with overtime	13.0%	10.7%	15.5%	24.4%	26.3%	29.7%
Per cent with paid overtime	n/a	n/a	9.7%	19.6%	19.8%	23.9%
Per cent with unpaid overtime	n/a	n/a	6.4%	7.7%	10.0%	8.4%
35-44						
Per cent with overtime	12.4%	12.3%	15.0%	27.3%	30.9%	31.2%
Per cent with paid overtime	n/a	n/a	9.3%	16.6%	21.6%	22.3%
Per cent with unpaid overtime	n/a	n/a	6.6%	13.1%	12.6%	12.6%
45-49						
Per cent with overtime	12.2%	7.9%	15.3%	25.0%	33.3%	27.4%
Per cent with paid overtime	n/a	n/a	8.7%	16.3%	20.2%	18.1%
Per cent with unpaid overtime	n/a	n/a	7.5%	11.0%	16.7%	13.5%
50-54						
Per cent with overtime	9.2%	6.9%	17.4%	31.0%	30.4%	33.2%
Per cent with paid overtime	n/a	n/a	10.0%	17.5%	19.8%	19.3%
Per cent with unpaid overtime	n/a	n/a	8.6%	16.4%	14.7%	16.4%
55+						
Per cent with overtime	9.7%	8.9%	12.9%	26.1%	25.8%	33.6%
Per cent with paid overtime	n/a	n/a	4.3%	16.1%	16.6%	20.3%
Per cent with unpaid overtime	n/a	n/a	8.9%	12.1%	11.8%	16.8%

- Paid and unpaid overtime hours are not available for the 1987 or 1992 LFS.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- The percentage of nurses working overtime hours, both paid and unpaid, has increased over time.
- In 2008, public-sector health-care nurses 50 years of age and older reported more unpaid hours when compared with nurses younger than 50.
- There has been an increasing proportion of public-sector health-care nurses reporting paid overtime in each year presented in the table above after 1992, except for nurses aged 45 to 54.

Table 4d: Incidence of Overtime for Public-Sector Health-Care Nurses by Full or Part-time Employment, Canada, Selected Years

	1987	1992	1997	2002	2005	2008
Public-Sector Health-Care Nurses	175,300	182,500	172,400	215,700	215,500	232,000
Those present during reference week	152,400	159,900	147,000	187,100	185,400	196,900
Full-time present during reference week	108,900	112,200	103,300	140,700	140,400	154,300
Part-time present during reference week	43,500	47,700	43,800	46,400	45,000	42,600
Those with overtime hours	18,700	16,700	22,600	49,900	54,400	61,000
Full-time	12,800	10,600	16,400	41,100	45,400	51,000
Part-time	6,000	6,100	6,200	8,700	8,900	10,100
Those with paid overtime hours	n/a	n/a	13,300	32,500	36,900	41,900
Full-time	n/a	n/a	9,100	26,000	31,200	34,900
Part-time	n/a	n/a	4,100	6,500	5,700	7,000
Those with unpaid overtime hours	n/a	n/a	10,400	22,200	23,800	25,500
Full-time	n/a	n/a	8,200	19,100	19,500	21,700
Part-time	n/a	n/a	2,200	3,100	4,300	3,800

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

- Paid and unpaid overtime hours are not available for the 1987 or 1992 LFS.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- There were fewer part-time public-sector health-care nurses working unpaid overtime hours in 2008 than in 2005.
- There have been an increasing proportion of nurses working overtime hours, for both full- and part-time workers.

Table 4e: Overtime Rate for Public-Sector Health-Care Nurses, Canada, Selected Years [1]

	1987	1992	1997	2002	2005	2008
Those with overtime	12.3%	10.4%	15.3%	26.7%	29.3%	31.0%
Full-time	11.7%	9.5%	15.9%	29.2%	32.4%	33.0%
Part-time	13.7%	12.8%	14.1%	18.8%	19.8%	23.6%
Those with paid overtime hours	n/a	n/a	9.0%	17.4%	19.9%	21.3%
Full-time	n/a	n/a	8.8%	18.5%	22.2%	22.6%
Part-time	n/a	n/a	9.4%	14.0%	12.7%	16.5%
Those with unpaid overtime hours	n/a	n/a	7.1%	11.8%	12.8%	12.9%
Full-time	n/a	n/a	7.9%	13.6%	13.9%	14.0%
Part-time	n/a	n/a	5.1%	6.6%	9.5%	9.0%

[1] Calculated against those present during reference week.

- Paid and unpaid overtime hours are not available for the 1987 or 1992 LFS.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

Table 5: Annual Aggregate Overtime Hours for Public-Sector Health-Care Nurses, Canada, Selected Years

	1987	1992	1997	2002	2005	2008
Public-Sector Health-Care Nurses	175,300	182,500	172,400	215,700	215,500	232,000
Those present during reference week	152,400	159,900	147,000	187,100	185,400	196,900
Those with overtime	18,700	16,700	22,600	49,900	54,400	61,000
Those with paid overtime hours	n/a	n/a	13,300	32,500	36,900	41,900
Those with unpaid overtime hours	n/a	n/a	10,400	22,200	23,800	25,500
<i>Average hours of overtime per overtime worker per week</i>						
All Overtime [1]	7.7	8.2	6.4	6.2	6.4	6.8
Paid Overtime	n/a	n/a	6.9	6.7	7.0	7.5
Unpaid Overtime	n/a	n/a	4.9	4.1	3.8	3.9
<i>Aggregate number of overtime hours per week [2]</i>						
All Overtime	144,600	136,300	143,200	307,900	349,700	412,200
Paid Overtime	n/a	n/a	92,100	217,600	259,800	313,300
Unpaid Overtime	n/a	n/a	51,200	90,300	90,000	98,900
<i>per year [3]</i>						
All Overtime	7,529,700	7,122,300	7,478,600	16,061,700	18,227,900	21,560,100
Paid Overtime	n/a	n/a	4,813,200	11,357,700	13,538,800	16,381,400
Unpaid Overtime	n/a	n/a	2,665,400	4,704,100	4,689,000	5,178,700
<i>Aggregate Annual Overtime Hours as Full-time, Full-year Equivalents (FTEs) [4]</i>						
All Overtime	4,153	3,928	4,125	8,859	10,054	11,892
Paid Overtime	n/a	n/a	2,655	6,265	7,468	9,036
Unpaid Overtime	n/a	n/a	1,470	2,595	2,586	2,856
<i>FTEs as a proportion of Public-Sector Health-Care Nurses present during Reference Week</i>						
All Overtime	2.7%	2.5%	2.8%	4.7%	5.4%	6.0%
Paid Overtime	n/a	n/a	1.8%	3.3%	4.0%	4.6%
Unpaid Overtime	n/a	n/a	1.0%	1.4%	1.4%	1.5%

[1] 1987 and 1992 have 2 hour groupings for overtime, and the maximum possible values are reported here.

[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.

[4] Aggregate overtime hours per month are the average of the 12 survey month estimates. Average hours per year are the sum of the 12 survey month estimates of aggregate overtime hours. Assuming one FTE is equal to 1813 hours per year.

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

- Paid and unpaid overtime hours are not available for the 1987 or 1992 LFS.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

Table 5 presents the average number of public-sector health-care nurses reporting overtime, for both paid and unpaid hours. The average hours of overtime worked, and the total number of overtime hours per week and per year are also reported. Calculations were also made to determine the number of full-time equivalents (FTE) of overtime hours, and the FTE proportion of nurses who report overtime hours against all nurses present during the reference week.

- In 2008, public-sector health-care nurses who reported paid overtime worked 7.5 hours, on average, during the reference week. This is higher than any of the selected years reported in Table 5.
- On average, nurses working unpaid overtime work approximately 4 hours extra per week. This average has not changed significantly since 2002.

- The number of FTEs working overtime has increased by 18 per cent from 2005 to 2008. After adjusting for the increase in the number of public-sector health care nurses from 2005 to 2008, the number of FTEs working overtime increased by 10 per cent.
- When comparing 2008 with 2002, the number of FTEs working overtime has increased by 34 per cent from 2002 to 2008. After adjusting for the increase in the number of public-sector health care nurses from 2002 to 2008, the number of FTEs working overtime increased by 26 per cent.
- The proportion of FTE overtime hours to the total number of public-sector health-care nurses who were present during the reference week also increased from 2002 to 2008.

3.4 Estimated Cost of Absenteeism and Overtime

Table 6: Estimated Cost of Absenteeism due to Own Illness or Disability and Overtime for Public-Sector Health-Care Nurses, 2005 and 2008

	2005	2008
<i>Absenteeism</i>		
All Public-Sector Health-Care Nurses	215,500	232,000
Absent nurses per week	16,500	21,500
Hours lost per week	340,000	495,600
Weighted average wage rate [1]	\$27.82	\$31.31
Cost of absenteeism		
per week	\$9,458,800	\$15,520,500
per year [2]	\$463,479,700	\$760,503,500
<i>Overtime</i>		
Those present during reference week	185,400	196,900
<i>Paid Overtime</i>		
Nurses working paid overtime per week	36,900	41,900
Paid Overtime hours per week	259,800	313,300
Weighted average wage rate [3]	\$28.22	\$31.00
Premium rate [4]	1.5	1.5
Cost of Paid Overtime		
per week	\$10,997,100	\$14,566,700
per year	\$538,858,300	\$713,770,700
<i>Unpaid Overtime</i>		
Nurses working unpaid overtime per week	23,800	25,500
Unpaid Overtime hours per week	90,000	98,900
Weighted average wage rate [5]	\$29.26	\$34.04
Cost of Unpaid Overtime		
per week	\$2,632,200	\$3,368,500
per year	\$128,979,100	\$165,055,000

[1] Wage rate is usual hourly wages, including bonuses, before taxes.

Wage rate is weighted by fraction of nurses reporting a given wage rate.

[2] Assuming 49 working weeks in one work year.

[3] Weighted average wage rate among nurses working paid Overtime.

[4] Assuming Overtime is paid with a premium rate of 1.5.

[5] Weighted average wage rate among nurses working unpaid Overtime.

- Note that estimates are based on averages and broad assumptions.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

Table 6 presents the weighted-average wage rate for those who were absent during the reference week, as well as the wage rate of those who reported overtime hours. With that information, and with the aggregate hours of absenteeism due to own illness or disability, and overtime hours reported, the cost of absenteeism and overtime was calculated.

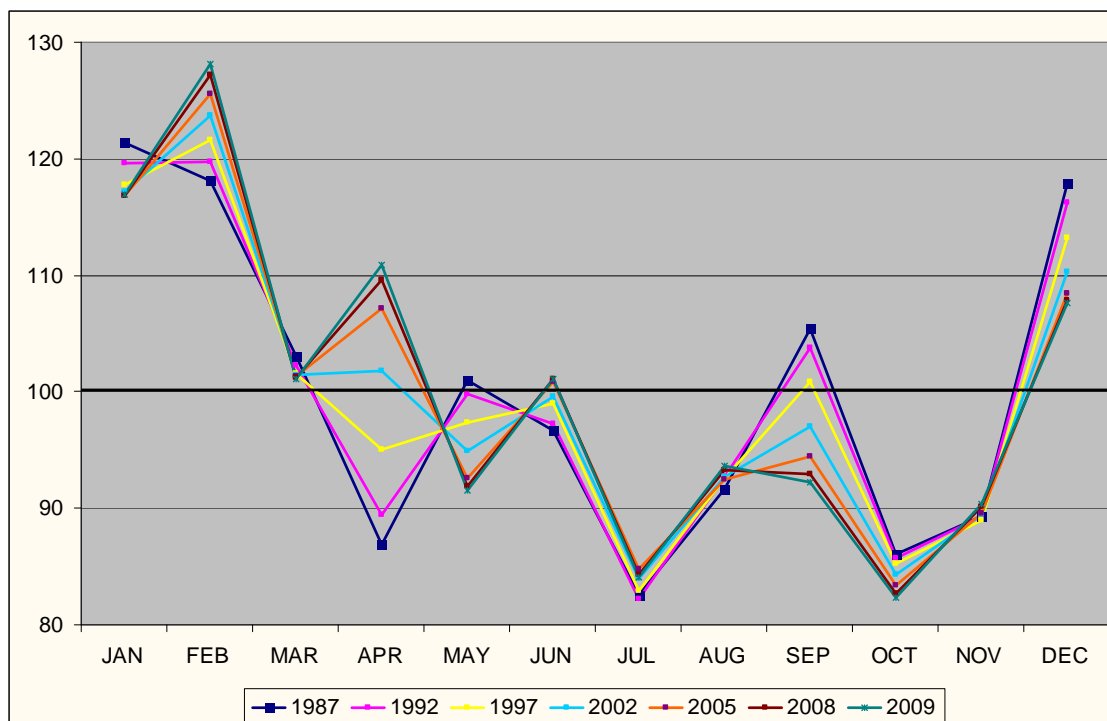
- The weighted average wage rate for public-sector health-care nurses who reported absence due to own illness or injury in 2008 was \$31 per hour. The cost of absenteeism, based on the weighted average wage rate, was found to be \$15.5 million per week, and \$760.5 million per year.

- The weighted average wage rate for public-sector health-care nurses who reported working paid overtime in 2008 was \$31 per hour. The cost of paid overtime, based on 1.5 times the weighted average wage rate for those with paid overtime hours (premium wage rate), was found to be \$14.6 million per week, and \$713.8 million per year.
- The weighted average wage rate for public-sector health-care nurses who reported working unpaid overtime in 2008 was \$34 per hour. The cost of unpaid overtime, based on the weighted average wage rate of those with unpaid hours, was found to be \$3.4 million per week, and \$165.1 million per year.
- The weighted average wage rate for public-sector health-care nurses who reported absence due to own illness or injury in 2005 was \$28 per hour. The cost of absenteeism, based on the weighted average wage rate, was found to be \$9.5 million per week, and \$463.4 million per year.
- The weighted average wage rate for public-sector health-care nurses who reported working paid overtime in 2005 was \$28 per hour. The cost of paid overtime, based on a premium wage rate, was found to be \$11 million per week, and \$538.9 million per year.
- The weighted average wage rate for public-sector health-care nurses who reported working unpaid overtime in 2005 was \$29 per hour. The cost of unpaid overtime, based on the weighted average wage rate, was found to be \$2.6 million per week, and \$129 million per year.
- When considering these costs as annual measures per nurse, and making assumptions such as a premium wage rate for paid overtime; the cost of absenteeism due to own illness or disability and total overtime (paid and unpaid) for public-sector health-care nurses was \$5,300 per nurse in 2005, and \$7,100 per nurse in 2008.

3.5 Seasonal Patterns

The connection of the time of year and absences was explored. Through the application of a seasonal adjustment, and regression analyses, it was discovered that, on average, public-sector health-care nurses report own illness or disability-related absences more often in January, February and December.¹⁴ When taking into account the seasonal trend, there are typically fewer absences due to own illness or disability in July and October.¹⁵

Figure 5: Own Illness or Disability-Related Absenteeism for Public-Sector Health-Care Nurses, Seasonal Effects, Canada, Selected Years and 2009 Forecast



Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

Figure 5 above shows the seasonal factors for each month, by year. Each data point represents the effect of the seasonal trend of the observed data. Thus, any value above 100 in the figure above represents a month that has typically more absenteeism than in months with a data point less than 100. This being said, the regression results suggest that less than 20 per cent of absences are explained by the calendar month.



¹⁴ The seasonal adjustment process and the regression used to determine these findings are reported in the appendix.

¹⁵ In 1987, there were fewer absences in April, when taking seasonal factors into account.

3.6 Provincial Absenteeism Patterns

Table 7(i): Absent Public-Sector Health-Care Nurses Due to Own Illness or Disability, by Province, Selected Years

	1987	1992	1997	2002	2005	2008
Newfoundland	-	200	300	400	400	600
PEI	-	-	-	100	-	100
Nova Scotia	200	400	600	400	700	500
New Brunswick	300	400	400	500	700	700
Quebec	3,700	3,700	4,000	4,600	5,000	5,900
Ontario	2,400	2,100	2,800	5,800	4,400	6,700
Manitoba	400	500	600	700	700	1,200
Saskatchewan	200	200	400	700	800	600
Alberta	700	700	700	1,700	1,500	2,800
British Columbia	1,200	900	2,000	2,600	2,100	2,300
Sum of Provinces	9,400	9,200	11,700	17,400	16,500	21,500
Atlantic	700	1,000	1,300	1,400	1,900	1,900
Québec	3,700	3,700	4,000	4,600	5,000	5,900
Ontario	2,400	2,100	2,800	5,800	4,400	6,700
Prairies	1,300	1,400	1,700	3,100	3,000	4,700
British Columbia	1,200	900	2,000	2,600	2,100	2,300

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

"-" - sample size exclusion

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- The more populous provinces have more nurses absent due to own illness or disability than provinces with fewer nurses.
- There was a decline in the number of absent nurses in Nova Scotia, New Brunswick and Saskatchewan from 2005 to 2008.
- There was an increase of approximately 1,300 public-sector health-care nurses absent in Alberta from 2005 to 2008, an increase of about 90 per cent. Similar findings are evident in Manitoba from 2005 to 2008.

Table 7(ii): Absentee Rate for Public-Sector Health-Care Nurses Due to Own Illness or Disability, by Province, Selected Years

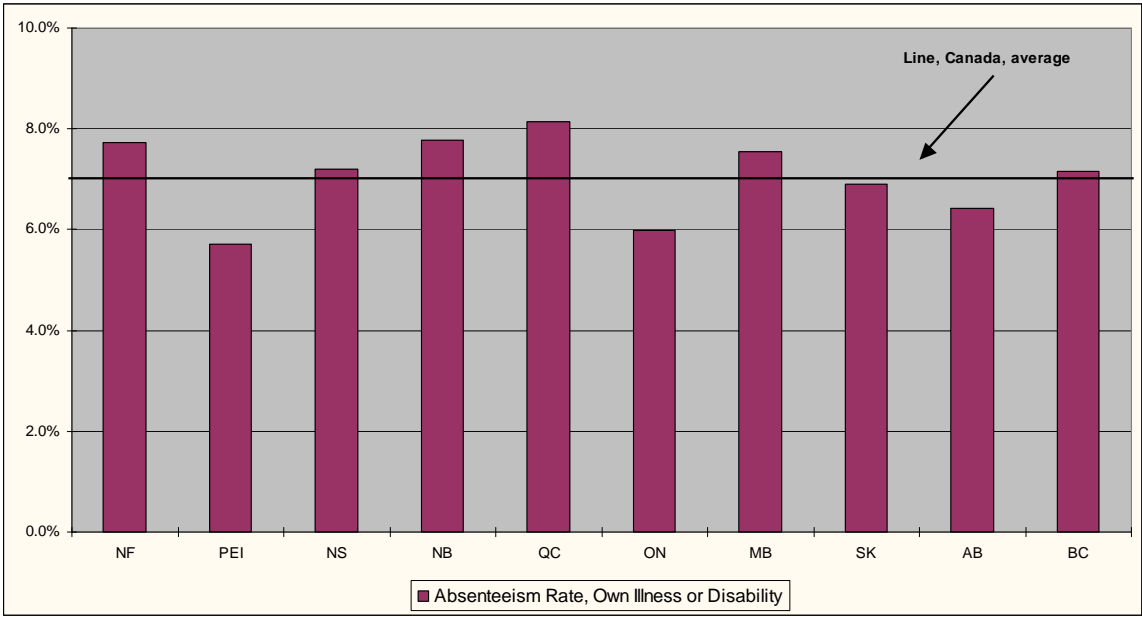
	1987	1992	1997	2002	2005	2008
Newfoundland	5.5%	6.8%	7.0%	6.8%	9.0%	11.2%
PEI	1.6%	5.1%	4.9%	8.7%	6.4%	7.5%
Nova Scotia	4.0%	5.2%	9.8%	6.3%	10.3%	7.4%
New Brunswick	6.4%	5.8%	7.0%	7.5%	10.5%	9.4%
Quebec	6.2%	6.4%	8.4%	8.8%	8.2%	10.9%
Ontario	4.2%	3.7%	5.1%	7.5%	6.6%	8.8%
Manitoba	6.1%	6.7%	7.6%	7.2%	7.4%	10.3%
Saskatchewan	3.0%	2.9%	7.2%	10.8%	9.9%	7.6%
Alberta	5.1%	5.2%	4.5%	7.4%	6.3%	10.1%
British Columbia	6.6%	4.2%	7.8%	9.2%	8.0%	7.1%
Canada	5.3%	5.0%	6.8%	8.1%	7.6%	9.3%

- Newfoundland and Prince Edward Island met the sample size criterion for the rates presented here.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- Provinces that had a decline in their absenteeism rate from 2005 to 2008 were Nova Scotia, New Brunswick, Saskatchewan and British Columbia.
- Provinces with higher-than-average incidences of absenteeism are Newfoundland and Labrador, New Brunswick, Quebec, Manitoba and Alberta.
- Ontario is the only province that consistently has an absentee rate less than the national average, in all of the selected years presented above. Meanwhile New Brunswick and Quebec typically have higher than national average incidences of own illness or disability related absenteeism.

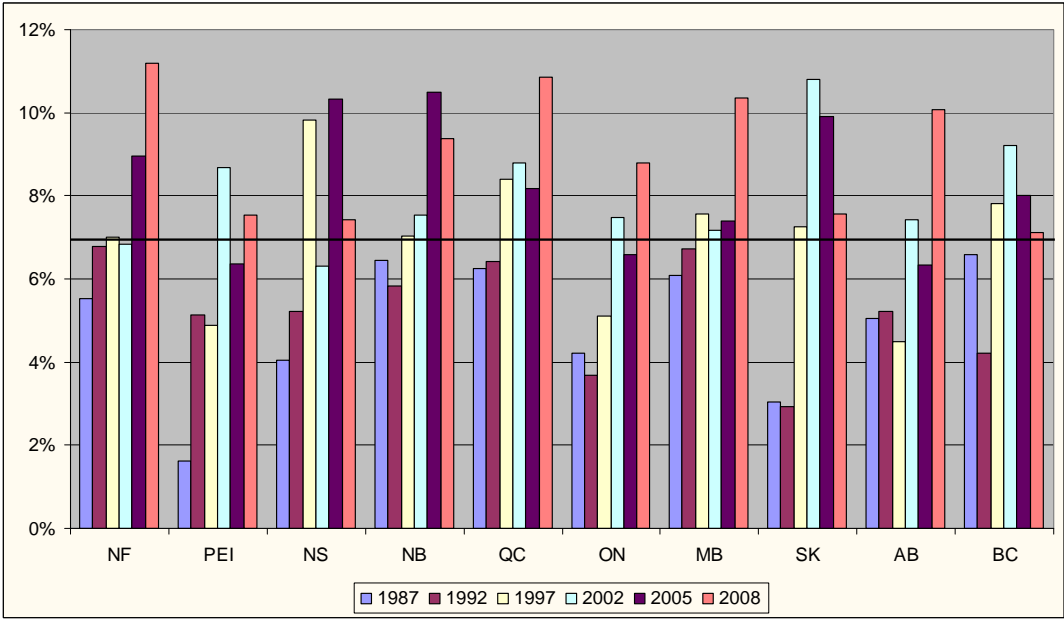
Figure 6: Average Absenteeism Rate for Public-Sector Health-Care Nurses due to Own Illness or Disability, by Province, Average of Selected Years between 1987-2008



Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

This figure annualizes the information from Table 7(ii). Note the average incidences of absenteeism are based on the selected years used in this report.

Figure 7: Own Illness or Disability-Related Absenteeism Rate for Public-Sector Health-Care Nurses, by Province, Selected Years



Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited



The figure above is a visual representation of Table 7(ii), but the line for Canada is the average of all years reported in the table.

3.7 Overtime-to-Absenteeism Ratio

Table 8: Overtime-to-Absenteeism Ratio, Public-Sector Health-Care Nurses, Canada, by Month, 2008

	Average Weekly Rate		Ratio
	Overtime	Absentees	
January	31%	11%	2.5
February	31%	11%	2.5
March	33%	10%	3.0
April	31%	11%	2.4
May	31%	8%	3.2
June	31%	10%	2.8
July	32%	9%	2.9
August	28%	8%	2.7
September	29%	9%	2.8
October	35%	7%	3.9
November	29%	8%	3.3
December	32%	10%	2.8
Average	31%	9%	2.8

- Overtime rate is based on those present during the reference week.

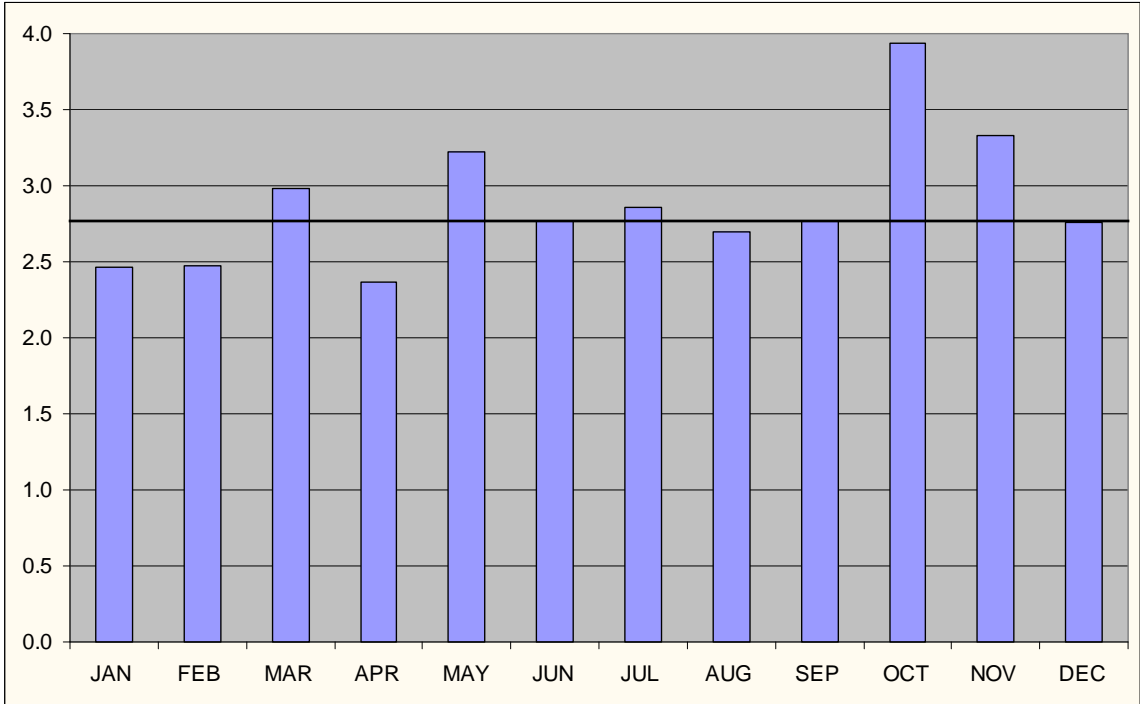
- Absentee rate is due to Own Illness or Disability.

- Ratio is based on number who worked overtime, and number of absentee nurses, not their respective rates.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- In 2008, there was a lower overtime rate in August, September and November than the other months.
- The ratio of overtime to absenteeism in 2008 was lowest in April, and highest in October.

Figure 8: Overtime-to-Absenteeism Ratio for Public-Sector Health-Care Nurses, Canada, by Month, 2008



Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

The figure above is a visual representation of Table 8.

Table 9(i): Public-Sector Health-Care Nurses with Overtime Hours, by Province, Selected Years

	1987	1992	1997	2002	2005	2008
Newfoundland	300	400	600	1,100	900	1,400
PEI	-	-	100	200	200	300
Nova Scotia	500	800	900	1,500	1,600	1,600
New Brunswick	600	600	700	1,800	1,400	1,900
Quebec	4,700	4,000	4,500	9,900	16,600	15,500
Ontario	7,400	5,300	7,800	18,300	16,200	19,800
Manitoba	1,100	900	1,400	2,600	2,500	2,900
Saskatchewan	600	600	800	1,300	1,900	2,200
Alberta	1,800	1,800	2,000	6,800	6,700	7,100
British Columbia	1,800	2,200	3,800	6,200	6,400	8,200
Sum of Provinces	18,700	16,700	22,600	49,900	54,400	61,000
Atlantic	1,400	1,800	2,300	4,700	4,100	5,300
Québec	4,700	4,000	4,500	9,900	16,600	15,500
Ontario	7,400	5,300	7,800	18,300	16,200	19,800
Prairies	3,500	3,300	4,200	10,800	11,100	12,100
British Columbia	1,800	2,200	3,800	6,200	6,400	8,200

- There is a conceptual break in data presented between 1997 and 2002, Census weights and the treatment of public-sector and private-sector health-care employees are different.

"-" - sample size exclusion

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- In 2005, 30.5 per cent of total overtime hours occurred in Quebec. By 2008, that share dropped to 25.5 per cent.

Table 9(ii): Overtime Rate for Public-Sector Health-Care Nurses, by Province, Selected Years [1]

	1987	1992	1997	2002	2005	2008
Newfoundland	12.7%	11.8%	15.7%	22.9%	23.3%	31.2%
PEI	7.6%	9.0%	9.6%	20.6%	21.8%	21.8%
Nova Scotia	9.5%	11.8%	18.0%	28.3%	26.8%	26.6%
New Brunswick	12.7%	11.3%	13.9%	28.2%	24.1%	29.3%
Quebec	9.3%	8.0%	11.6%	22.5%	33.1%	34.7%
Ontario	14.8%	10.4%	16.1%	27.2%	27.5%	30.4%
Manitoba	16.2%	14.4%	21.5%	32.4%	28.6%	29.3%
Saskatchewan	11.3%	10.0%	15.1%	24.5%	26.9%	29.5%
Alberta	15.0%	15.0%	16.0%	32.5%	31.8%	31.5%
British Columbia	11.3%	12.1%	18.0%	26.3%	28.0%	28.8%
Canada	12.3%	10.4%	15.3%	26.7%	29.3%	31.0%

[1] Overtime rate is based on those present during the reference week.

- Prince Edward Island met the sample size criterion for the rates presented here.

Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- Since 2002, the overtime rate in Nova Scotia, Manitoba and Alberta has decreased.

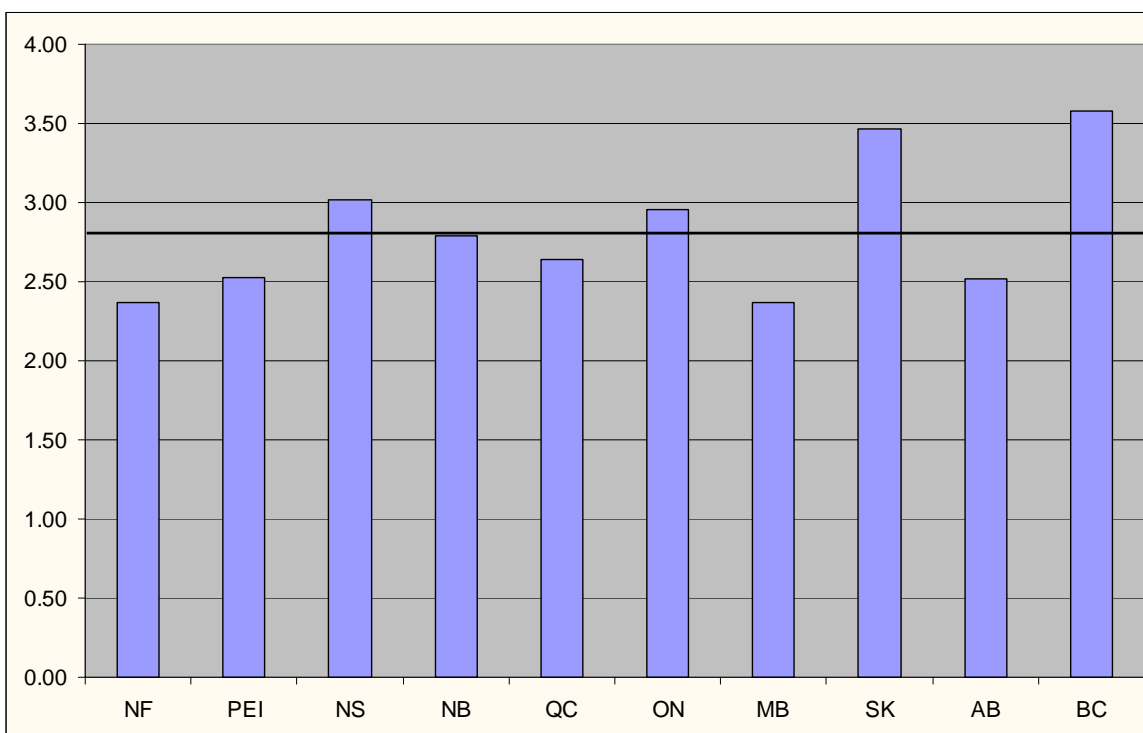
Table 10: Overtime-to-Absenteeism Ratio, Public-Sector Health-Care Nurses, by Province, 2008

	Average Weekly Rate		
	Overtime	Absentees	Ratio
Newfoundland	31%	11%	2.4
PEI	22%	8%	2.5
Nova Scotia	27%	7%	3.0
New Brunswick	29%	9%	2.8
Quebec	35%	11%	2.6
Ontario	30%	9%	3.0
Manitoba	29%	10%	2.4
Saskatchewan	30%	8%	3.5
Alberta	31%	10%	2.5
British Columbia	29%	8%	3.6
Canada	31%	9%	2.8

- Overtime rate is based on those present during the reference week.
 - Absentee rate is due to Own Illness or Disability.
 - Ratio is based on number who worked overtime, and number of absentee nurses, not their respective rates.
 Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

- The province with the lowest overtime rate in 2008 was PEI.
- British Columbia had the highest overtime-to-absenteeism ratio in 2008.

Figure 9: Overtime-to-Absenteeism Ratio, Public-Sector Health-Care Nurses, by Province, 2008



Source: Special tabulation of Statistics Canada's LFS PUMF, selected years, by Informetrica Limited

The figure above is a visual representation of Table 9.

3.8 Explanations for Absenteeism

Regressions to help explain absenteeism of nurse supervisors and registered nurses were performed. Factors included the age of the nurse, presence of a spouse, age of the youngest child, unionization, province of residence, and whether or not the nurse worked in public- or privately-funded organizations. Both linear and logistic regressions were attempted, but the fit of the residuals suggested the regressors did not adequately explain why nurse supervisors and registered nurses miss work.¹⁶

Panel data may be better for determining the reasons why nurses are absent more often due to own illness or disability than other occupations than the use of LFS data. The LFS data bring in micro data regarding personal characteristics that are observable. Measures of stress may be required, and developed (possibly with the LFS data) to better address this topic. Another question that may be asked or pursued is to consider all reasons for absences and their effect, if any, on absences due to own illness or disability.



¹⁶ The linear model using all factors stated above had an R-squared value of 4 per cent.

4 Conclusions

The LFS is a large dataset that allows basic information regarding occupation and industry classification to be reported. When looking at more minute details, say specific information regarding provincial, monthly, or family-type data, sample size becomes an issue when cutting the data more finely.

This paper presented 6 years of data that span 21 years. Based on that fact, it has been shown that nurses are absent more often than other occupations due to own illness or disability and that more nurses, on average, work paid overtime hours. Details regarding the province of residence, family composition, tenure, ageing, etc. were presented in this report and conclusions can be made from these observable characteristics. Is the current trend of increasing incidences of absenteeism and overtime sustainable, or will this further strain the system's resources? Future work that specifically focuses on these items may be beneficial if those parties interested do not want to see a continual increase in absentee rates and incidences of paid overtime.

4.1 Further areas for research

More detailed analyses of unionization and overtime hours could be conducted (dependent on sample size). The seasonality of overtime hours may also be of interest, a topic that was discussed for absenteeism, but not overtime.

Further expansion of the regression analysis presented in this paper would allow for more detailed understanding. Does the dataset being used for analyses have the appropriate information for identifying why nurses are absent more often than employees of other occupations? The basic items included in the initial regressions were not adequate at explaining absenteeism, and more detail may be required from the LFS, or the application of other data sources (for example, panel data from a survey). Items that may be useful but are not covered with the extensive national survey include the handling of shifts in different provinces, or hospitals (i.e. the switch from 3 shifts to 2 shifts in a 24-hour period).

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6 Appendix

6.1 Glossary of Terms

Absentee Rate: The number of employees who missed all or part of the reference week, divided by the total number of employees. These rates are presented by occupation in this report.

How does this calculation differ from the Overtime Rate? The denominator for the overtime rate only includes those present during the reference week, whereas all employees are included in the absentee rate.

Aggregate hours lost: This is reported per week and per month. For those who missed the entire reference week, their usual hours worked per week as reported in the LFS was determined to be their hours lost. For those who were absent part of the week, their reported “hours lost” item in the LFS was used to determine their hours lost. These two items were combined to capture aggregate hours.

- Per week: Weekly aggregate hours lost were calculated by dividing the aggregate hours by 12.
- Per month: The aggregate weekly hours lost was divided by 7 to capture aggregate hours lost per day. That number was then multiplied by the number of days in each respective month. Note that leap years in 1992 and 2008 were taken into account with this item.

Employment Status:

- **Full-time worker:** This paper reports “full-time” as 30 or more hours of work during the reference week. This is consistent with the definition of full-time employment in the LFS.
- **Part-time Worker:** This paper reports “part-time” as less than 30 hours of work during the reference week. This is consistent with the definition of part-time employment in the LFS.

Full-Time Equivalent (FTE): This measure allows for establishing a consistent definition, or quantifying employment. This paper reports information based on the LFS, which consists of “body counts” of employed persons. One FTE in this paper is defined as 49 weeks of employment, while working 37 hours per week, or 1,813 hours per year. This definition was kept consistent with the previous studies.

Labour Force Survey (LFS): “The LFS is the official source of monthly estimates of total employment (paid work, self employment, full- and part-time work) and unemployment.”¹⁷ This survey was used as the data source for this report.

National Occupation Classification – Statistics (NOC-S): Standardized occupation classification system that is used by Statistics Canada, and from which the occupation definitions

are based in this paper since 2002. The LFS data presented in this report are based on NOC-S2001.

Standard Occupational Classification (SOC) System: The occupational classification system for which data from 1997 and earlier are reported in this paper. The occupation information reported in this paper is based on SOC-S1991 for 1997 and earlier.

The main differences between these two classification systems is the inclusion of “Elemental Medical and Hospital Assistants” from the SOC-S1991 into the NOC-S2001 occupation “Other Assisting Occupations in Support of Health Services”.¹⁸

North American Industry Classification System (NAICS): The industrial classifications used in this report are based on NAICS 2002, for all years presented in this report.

Overtime Rate: “The number of hours worked during the reference week in excess of the usual hours reported in main job” divided by those present during the reference week.¹⁹ This includes those working paid and unpaid overtime. Note that there is no double counting of individuals who report both paid and unpaid overtime with the reporting of aggregate persons reporting overtime. These rates are presented by occupation in this report.

How does this calculation differ from the Absentee Rate? The denominator for the overtime rate only includes those present during the reference week, whereas all employees are included in the absentee rate.

Private-Sector Worker: Any employee working in a privately-funded workplace. Note that this definition is not based on ownership. The definition changed regarding public and private employees in 1999 to harmonize the LFS with the System of National Accounts.²⁰ Statistics Canada has revised its historical data to reflect this change, but the information presented in this report remained consistent with earlier versions, and thus, the updated series were not used. Prior to 1999, working in the private sector implies those working in a privately-owned workplace. The main difference of this definition change affected persons working in hospitals.

Public-Sector Worker: Any worker employed in a publicly-funded workplace for data presented for 2002 and later; and any worker employed in a facility that was publicly owned prior to 2002. Further discussion is in the Private-Sector Worker definition.

Public-Sector Health-Care Nurse: Any registered nurse or nurse supervisor who works in the Health Care and Social Assistance industry in a publicly-funded workplace.

Reference Week: The week of the Labour Force Survey for respondents to the survey.

¹⁸ **Statistics Canada (2008):** “Concordance between the National Occupational Classification - Statistics (NOC-S) 2001 and the Standard Occupational Classification (SOC) 1991” <<http://www.statcan.gc.ca/subjects-sujets/standard-norme/concordances/noc2001-soc1999-cnp2001-ctp1999-eng.htm>>, accessed 25 May 2009.

¹⁹ **Statistics Canada (2009):** *LFS Guide*, P. 14.

²⁰ **Statistics Canada (2006):** *LFS Improvements*, P. 6.

Seasonal Adjustment: When there is a trend in data that can be associated with the time of year, a seasonal adjustment can be calculated to reveal the underlying trends. All monthly analyses reported that were not part of *Figure 5* were completed at the micro level and the seasonal effects were not incorporated with the analyses.²¹

We used the monthly absentee rate and asked if the month of the year had any influence on absences due to own illness or disability. The results showed that a small proportion of the variance of the absentee rates by month was explained by the month in the calendar year. The regression results were similar in their findings as for the seasonal adjustment.

By definition, seasonal factors cancel out over the year. Our focus on annual measures is little affected by seasonal factors.

Tenure: “The number of consecutive months or years a person has worked for the current (or, if employed within the previous twelve months, the most recent) employer.”²²

²¹ The seasonal adjustment process applied to the monthly absentee rate used a multiplicative model that decomposes the data into a seasonal trend, an underlying trend, and noise. The data reported in this paper is just the seasonal trend. A linear regression was run to see if the results would be similar to the seasonal adjustment process. The monthly absentee rate was used as the dependent variable, and the months of the year were applied as dummy variables in the regression. These results were consistent with the seasonal adjustment process.

²² **Statistics Canada (2009);** *LFS Guide*, P. 13.

6.2 Occupation Codes/Definitions for Health Occupations

The information presented below includes the Health Occupations presented in this report, and can be found at <http://www.statcan.gc.ca/subjects-sujets/standard-norme/soc-cnp/2001/noc2001-cnp2001-eng.htm>.²³

National Occupational Classification - Statistics (NOC-S) 2001

D Health Occupations

D0 Professional Occupations in Health

D01 Physicians, Dentists and Veterinarians

D011 Specialist Physicians

D012 General Practitioners and Family Physicians

D013 Dentists

D014 Veterinarians

D02 Optometrists, Chiropractors and Other Health Diagnosing and Treating Professionals

D021 Optometrists

D022 Chiropractors

D023 Other Professional Occupations in Health Diagnosing and Treating

D03 Pharmacists, Dietitians and Nutritionists

D031 Pharmacists

D032 Dietitians and Nutritionists

D04 Therapy and Assessment Professionals

D041 Audiologists and Speech-Language Pathologists

D042 Physiotherapists

D043 Occupational Therapists



²³ **Statistics Canada (2003):** "National Occupational Classification - Statistics (NOC-S) 2001 - Canada" <<http://www.statcan.gc.ca/subjects-sujets/standard-norme/soc-cnp/2001/noc2001-cnp2001-menu-eng.htm>>, accessed 25 May 2009.

D044 Other Professional Occupations in Therapy and Assessment

D1 Nurse Supervisors and Registered Nurses

D11 Nurse Supervisors and Registered Nurses

D111 Head Nurses and Supervisors

D112 Registered Nurses

D2 Technical and Related Occupations In Health

D21 Medical Technologists and Technicians (Except Dental Health)

D211 Medical Laboratory Technologists and Pathologists' Assistants

D212 Medical Laboratory Technicians

D213 Veterinary and Animal Health Technologists and Technicians

D214 Respiratory Therapists, Clinical Perfusionists and Cardio-Pulmonary Technologists

D215 Medical Radiation Technologists

D216 Medical Sonographers

D217 Cardiology Technologists

D218 Electroencephalographic and Other Diagnostic Technologists, n.e.c.

D219 Other Medical Technologists and Technicians (Except Dental Health)

D22 Technical Occupations in Dental Health Care

D221 Denturists

D222 Dental Hygienists and Dental Therapists

D223 Dental Technologists, Technicians and Laboratory Bench Workers

D23 Other Technical Occupations in Health Care (Except Dental)

D231 Opticians

D232 Midwives and Practitioners of Natural Healing

D233 Licensed Practical Nurses

D234 Ambulance Attendants and Other Paramedical Occupations

D235 Other Technical Occupations in Therapy and Assessment

D3 Assisting Occupations in Support of Health Services

D31 Assisting Occupations in Support of Health Services

D311 Dental Assistants

D312 Nurse Aides, Orderlies and Patient Service Associates

D313 Other Assisting Occupations in Support of Health Services