OFFICE OF THE PARLIAMENTARY BUDGET OFFICER
BUREAU DU DIRECTEUR PARLEMENTAIRE DU BUDGET

Fiscal Analysis of Sick Leave in the Federal Public Service

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The mandate of the Parliamentary Budget Officer (PBO) is to provide independent analysis to Parliament on the state of the nation's finances, the government's estimates, and trends in the national economy; and upon request from a committee or parliamentarian, to estimate the financial cost of any proposal for matters over which Parliament has jurisdiction.

The PBO received a request from the Member of Parliament for Ottawa Centre to undertake an independent fiscal analysis of absenteeism in the public service.

Key Messages

- The average sick leave of 18.26 days reported by Treasury Board Secretariat (TBS) includes time missed due to workplace injuries and unpaid sick leave. The average number of paid sick days taken by public servants in the core public administration (CPA) was reported at 11.52 days per year in 2011-2012.
- Consistent with the methodology used by the Government of Canada, the PBO assumed the CPA rate of sick leave for calculating the salary paid for sick leave for the federal public service (FPS).
- PBO estimates the salary paid for sick days in the FPS at $871 million in 2011-2012, approximately 68% higher than the estimate for 2001-2002 after accounting for inflationary factors. Growth in the size of the FPS, wages and the number of paid sick days all materially contributed to the increase in salary dollars paid for time lost.
- Data obtained from individual CPA departments demonstrates significant variance between organizations in the use of sick leave. The PBO will undertake further analysis to determine the materiality of these differences.
- The sick leave data published by the TBS reflects data obtained from the CPA. According to Statistics Canada data, CPA includes approximately 76% of FPS employees, and 41% of the federal workforce.

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The author wishes to thank Jason Jacques, Duncan MacDonald, Sahir Khan, Peter Weltman and Rod Story for their helpful comments. The author also thanks, without implicating, human resources professionals across the core public administration for their efforts in the preparation of data for this report. Any errors or omissions are the responsibility of the author. Please contact Erin Barkel (email: erin.barkel@parl.gc.ca) for further information.

Contents

1 Introduction

The Parliamentary Budget Officer (PBO) may, upon request from a committee or parliamentarian, estimate the financial cost of any proposal over which Parliament has jurisdiction.[1] Consistent with this mandate and at the request of a parliamentarian, this report provides a financial analysis of paid sick leave in the public service.

In order to determine the impact of sick leave, the PBO differentiated paid sick leave from other categories of paid and unpaid medical leave. The PBO defined paid sick leave as the time during which an employee is: 1) absent from work for reason of illness not related to workplace injuries; and 2) paid a salary during his or her absence (i.e., is not collecting disability insurance or employment insurance benefits). In other words, the annual cost of sick leave is defined as the total amount of salary paid to employees while they are on sick leave.

2 Methodology

The annual salary amount paid for sick leave may be calculated as a share of employee wages based on a 261-day work year[2], or:

$$Cost = \sum_{i}^{n} \frac{days_i \times wage_i}{261}$$

Where the inputs are:

n : the number of full time equivalent (FTE) positions in the federal public service (FPS)

$days_i$: the number of paid sick days taken by employee "i"

$wage_i$: the annual wage earned by employee "i"

The PBO obtained sick leave data from the Treasury Board Secretariat (TBS) and salary data from the Receiver General. However, sick leave data was only available for the core public administration (CPA) and was already aggregated, not allowing the PBO to calculate sick leave on a per-employee basis (see Box 3.1 for definitions of CPA and FPS). Using the available data, the PBO approximated the annual salary amount paid for sick leave as follows:

$$Cost = \frac{\overline{days}}{261} \times \sum wages$$

Where the inputs are:

$\overline{days}$: the average number of paid sick leave days taken by an employee in the CPA

$\sum wages$: sum of all FPS regular pay

3 Results and Trend Analysis

The PBO estimates that the cost of wages paid while employees were on sick leave amounted to $871 million in 2011-2012.[3]

Significant growth in the size of the FPS, wages, and the number of paid sick days materially contributed to the doubling of sick leave costs in the past decade. The following provides analysis of the contribution of each input to overall sick leave costs over the period from 2001-2002 until 2011-2012.

[1] *Parliament of Canada Act* (2007).

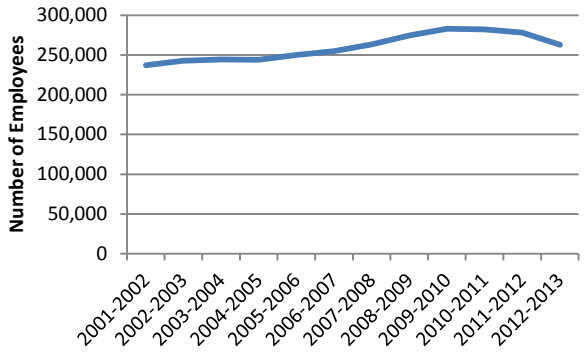
[2] Salary paid for overtime hours worked was not included in this calculation as sick leave can only be claimed for regular work hours.

[3] Note: 2011-2012 is the most recent year for which sick leave data is available.

3.1 Population of the FPS

Data obtained from the TBS website[4] indicates that the population of the federal public service[5] (FPS) experienced consistent growth between 2001-2002 and 2009-2010. While the FPS shrunk by approximately 19,500 employees between 2010-2011 and 2012-2013, its population grew by more than 17% over the period of interest from 2001-2002 to 2011-2012 (Figure 1 - FPS Growth).

Figure 1 - FPS Growth



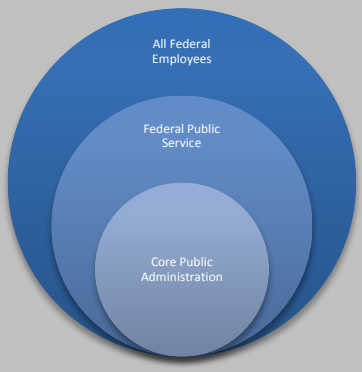
Source: Treasury Board Secretariat[6]

Box 3.1- Categories of Federal Employees

According to Statistics Canada data, the federal government employed approximately 530,000 part-time and full-time employees in 2012. This group, referred to in statistical tables as "all federal employees", includes not only public servants, but also members of the Royal Canadian Mounted Police, members of the Canadian Forces, employees of Parliament, and employees of Crown Corporations such as Canada Post.

The Federal Public Service (FPS) is made up of public servants who are employed by departments, agencies, and "separate agencies", such as the Canada Revenue Agency and Parks Canada. Data posted on the TBS website estimated the population of the FPS at 262,817 in 2012-13.

The Core Public Administration (CPA) excludes public servants who are employed by the separate agencies. TBS estimated the population of the CPA at 200,516 in 2012-2013, or about 76% of the FPS.



3.2 Number of Paid Sick Days

In response to an information request[7], the Treasury Board Secretariat provided the methodology and results of its estimates of "health related absences."

[4] Refer to *Population of the Federal Public Service* (http://www.tbs-sct.gc.ca/res/stats/ssen-ane-eng.asp) for additional information.
[5] The federal public service is composed of departments named in Schedules I, IV, and V of the *Financial Administration Act* (see http://laws-lois.justice.gc.ca/eng/acts/F-11/index.html). Refer to Box 3.1 for more information regarding the composition of the federal workforce.
[6] Supra note 4.
[7] For additional information, see response to Information Request IR0126 (http://www.pbo-dpb.gc.ca/files/files/Response_IR0126_TBS_Mod_Sick_Leave_Benefits_EN.pdf).

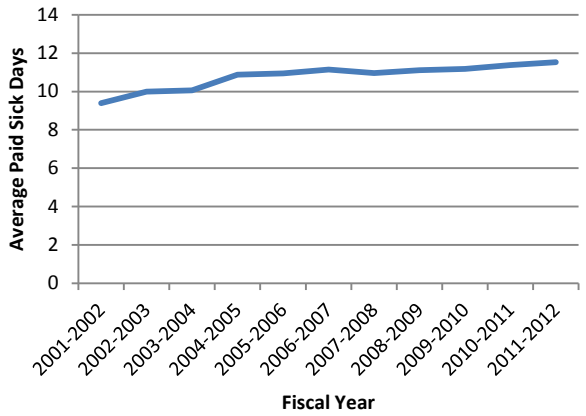
The estimates published by TBS are based on 10 years of data for the CPA.

Included in the estimates are paid sick leave, unpaid sick leave, and injury on duty leave. Estimates of the amount of unpaid sick leave were based on a survey of 20 departments and agencies, employing 86% of CPA full-time equivalent employees. In 2011-2012, the breakdown of health-related leave was as follows:

	Paid Sick Leave	11.52
+	Estimated Unpaid Sick Leave[8]	6.3
+	Injury on Duty Leave	0.44
	Total Health-Related Absences	18.26

Since the objective of the PBO was to estimate the salary amount paid for sick leave, unpaid sick leave and injury on duty leave were excluded from the analysis. Between 2001-2002 and 2011-2012, the number of paid sick days taken per FTE in the CPA increased by nearly 23% (Figure 2).

Figure 2 - CPA Paid Sick Days



Source: Treasury Board Secretariat[9]

Box 3.2 – Calculation of Averages

To undertake this analysis, the PBO requested information from the Treasury Board Secretariat (TBS) and the 20 departments and agencies which make up 86% of the CPA. However, the PBO was unable to reconcile the data obtained from TBS with the data provided by the departments due to differing methodologies and data sets.

TBS bases its analysis on a calculation of the number of "full-time full-year equivalents" (FTFYE) working in the department by using information obtained from the pay system to determine how many hours were worked. In simplest terms, TBS calculates average sick days *per FTE*. In contrast, many departments base their calculations on the total number of *people* who work in the departments, including those who worked less than full-time hours during the fiscal year.

The result of this difference is that TBS's denominator is usually less than the denominator used by the departments. Therefore, TBS's calculation will result in a greater number of "average" sick days. For illustrative purposes, a comparison of the two methodologies and results for Veterans Affairs Canada (VAC) is provided in Appendix A and Appendix B.

The PBO has submitted a follow-up request to undertake additional analysis of absenteeism in departments.

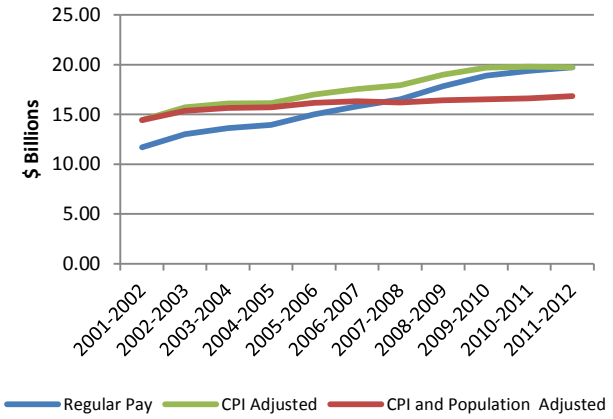
[8] Includes days missed for both reasons of short-term illness and long-term disability.

[9] Supra note 7.

3.3 Wages

Wage data[10] from the Receiver General show that straight time civilian pay grew more than 68% over the period of interest (see Figure 3). After controlling for inflation and growth in the population of the CPA, the real wage growth is approximately 17% over a 10-year period, in 2012 dollars.

Figure 3 – Wage Growth



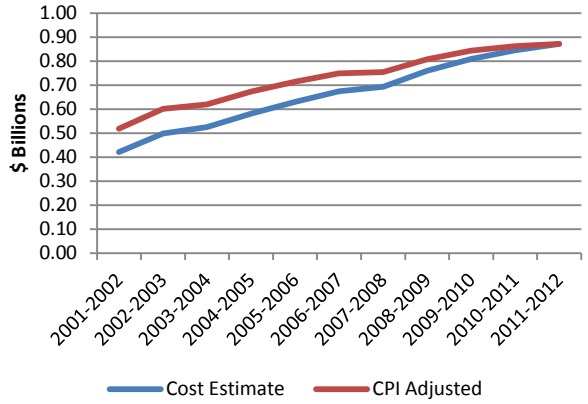
Source: Receiver General data

4 Analysis and Discussion

The estimated salary paid for sick leave in the FPS grew by 107% between 2001-2002 and 2011-2012 (Figure 4), or 68% after accounting for inflationary factors. Growth in the size of the FPS, wages, and an increase in the number of paid sick days used all materially contributed to this increase.

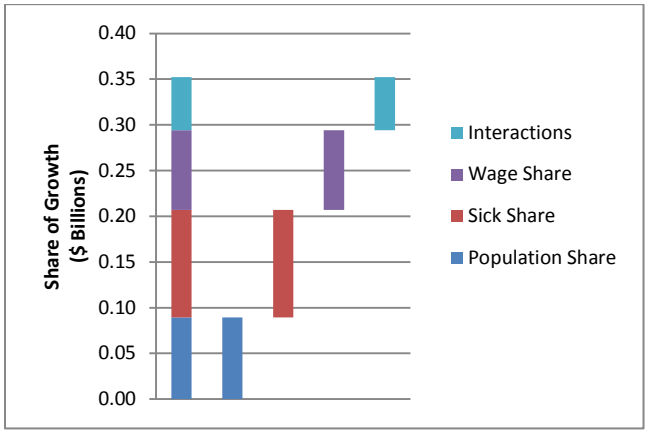
Using a decomposition methodology [11] the PBO determined that the increase in the number of paid sick days used accounted for 33% of the growth; increased wages for 25%; increased population of the FPS for 25%; and interactions between the three cost drivers for 17% (see Figure 5).

Figure 4 - Estimated Salary Paid for Sick Leave



Source: PBO Analysis

Figure 5 - CPI Adjusted Estimate of Sick Leave Increase, Decomposed by Cost Drivers



Source: PBO Analysis

4.1 Disability Leave

The health-related leave data collected by government departments and provided to the PBO by TBS does not differentiate between sick days taken for regular illness and those taken as part of disability leave. Consequently, the number of sick

[10] In October 2013, the PBO published an analysis of federal public service wage growth over a 10-year period. *Federal Public Service Wage Growth: 2001-02 to 2011-12* available online at: http://www.pbo-dpb.gc.ca/files/files/Federal_Public_Service_Wage_EN.pdf

[11] See Appendix D for methodology and calculations.

days reported by the government is to some extent inflated by those on disability leave.

The data provided by TBS does not enable analysis to determine how significantly sick days have been over-stated due to the inclusion of disability leave. However, the PBO received data from Aboriginal Affairs and Northern Development Canada (AANDC) which illustrates the significance of including health-related leaves of absence in the calculation of unpaid sick days (Box 4.1).

4.2 Expenses versus Liabilities

This report outlines how the *expense* of sick days has grown in the FPA, which differs from the government's reporting of sick leave *liabilities* for the entirety of the public service. [12]

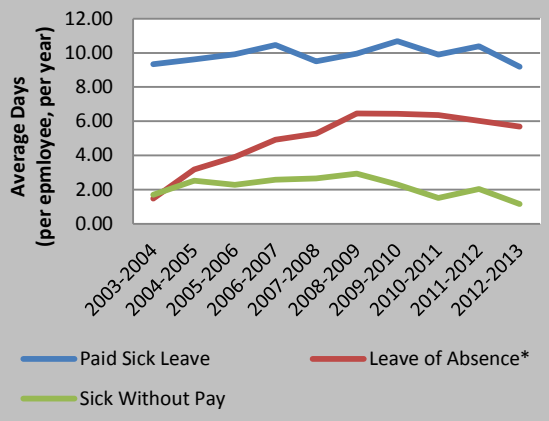
In the 2013 *Annual Financial Report of the Government of Canada*, Finance Canada reported that accumulated sick leave entitlements had reached $1.4 billion.[13] This valuation and the net increase over the previous year of $59 million, approximately $225 per public service employee, were derived from an actuarial valuation.[14] The analysis contained in that report was also based on CPA and Canada Revenue Agency data, and scaled to arrive at estimates for the public service.

Box 4.1 - AANDC Sick and Disability Data

The Treasury Board Secretariat and most departments who responded to the PBO request include disability leave in the calculation of both paid and unpaid sick days because public servants are required to exhaust all banked sick days before becoming eligible for disability benefits. AANDC provided data to differentiate between regular unpaid sick days from health-related leaves of absence.

The graph below illustrates that while AANDC's paid and unpaid sick days have remained relatively stable over the past decade, the number of days lost to leaves of absence has grown nearly four-fold.

This finding suggests that the number of employees on a health-related leave of absence has grown, which implies that an increasing number of employees are exhausting all of their banked sick days. Unfortunately, the PBO was unable to obtain the data required to undertake an analysis of the impact of these long-term leaves on the consumption of paid sick days.



*Health-related leaves of absence inclusive of injury on duty, illness, and disability

[12] The Government of Canada recently changed its accounting system for accumulated sick leave entitlements (i.e., banked sick days). Whereas in the past sick days were reported as an expense in the year in which they were used and no liability for banked sick days recorded, banked sick days are now reported as part of the accumulated deficit. See note iii on page 36 of the *Annual Financial Report of the Government of Canada,* available online at: http://www.fin.gc.ca/afr-rfa/2013/afr-rfa-eng.pdf.

[13] *Ibid* page 9.

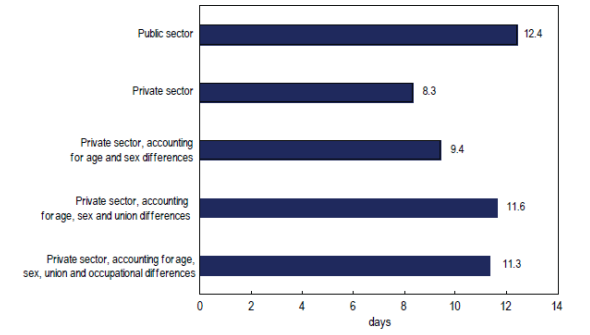
[14] PBO obtained the actuarial valuation through Information Request IR0138 (http://www.pbo-dpb.gc.ca/files/files/Response_IR0138_Compt_Gen_Restatement_accumulated_sick_leave_entitlements_EN.pdf).

4.3 Demographics

The results of this analysis should also be viewed in the context of the unique demographics of the public service. The population of the public sector employees differs from that of the private sector in three ways: 1) the average public sector employee is older than the average private sector employee; 2) there are more women in the public sector than in the private sector; and 3) more public sector employees are unionized than their private sector counterparts.[15] Statistics Canada found that accounting for these three factors reduced the difference in the absenteeism [16] of these two populations to 1.1 days (see chart below).

Figure 6 - Statistics Canada Analysis

Chart 2 Union coverage, age and sex differences account for most of the difference in days lost between public and private sector employees



Source: Statistics Canada, Labour Force Survey, 2012.

[15] *Ibid.*

[16] The PBO cannot extrapolate from this study as Statistics Canada uses a different data set and definition of absenteeism than does TBS. The source of data used in the Statistics Canada reports is the Labour Force Survey (LFS) data, which does not ask respondents to distinguish between paid and unpaid sick days, and includes personal and family leave. In 2011, Statistics Canada calculated the "days lost per worker" for federal public administration to be:

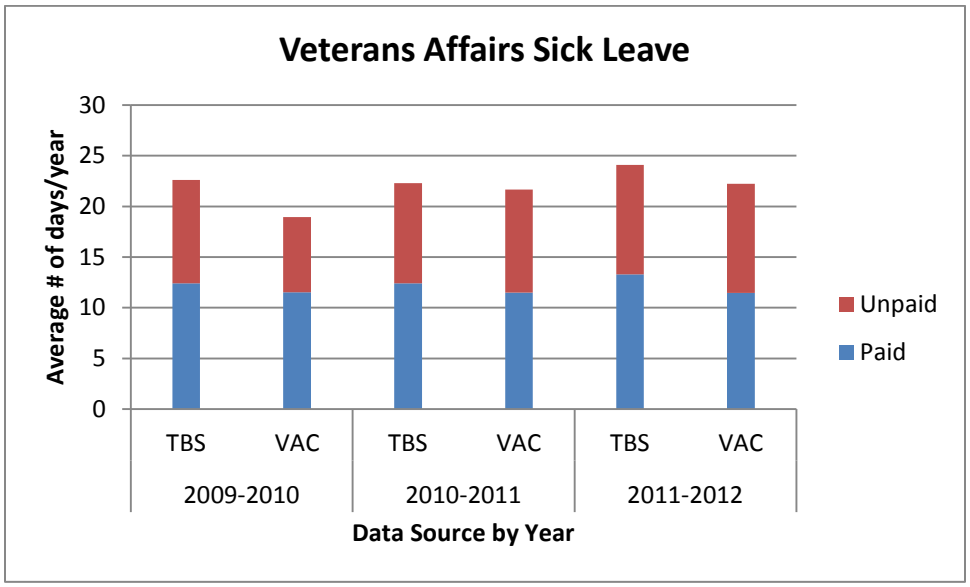
	Illness or disability	12.5
+	Personal or family responsibilities	2.7
	Total	15.2

Appendix A Comparison of Methodologies

The following is a methodology comparison between Treasury Board Secretariat and Veterans Affairs Canada:

	TBS	VAC
Who is included in the population count?	Indeterminate employees, employees with terms of greater than or equal to three months, and persons employed on a casual basis.	Indeterminate employees, employees with terms of greater than or equal to three months, persons employed on a casual basis, students, deputy ministers, ministerial staff, employees in France, and part-time persons not required to work more than 11.75 hrs per week.
How is paid sick leave calculated?	Average paid sick leave is calculated by dividing the total number of days of paid sick leave used by the total number of full-time full-year equivalents (FTFYE).	Average paid sick leave is calculated by dividing the total number of days of paid sick leave used by the employee population at the end of the fiscal year.
How are FTE's calculated?	FTFYE takes into consideration part-time employees' hours of work when calculating the conversion to FTE's.	Total FTE's represent the employee count at the end of the fiscal year.
How is unpaid sick leave calculated?	By dividing the total number of days of unpaid sick leave used by the average number of employees in the organization during the fiscal year. Average number of employees is based on the total number of employees at the end of each month, added up for the year, and then divided by 12.	By dividing the total number of days of unpaid sick leave used by the employee count as of the last day of the fiscal year.

Appendix B Comparison of Sick Leave Calculations for Veterans Affairs

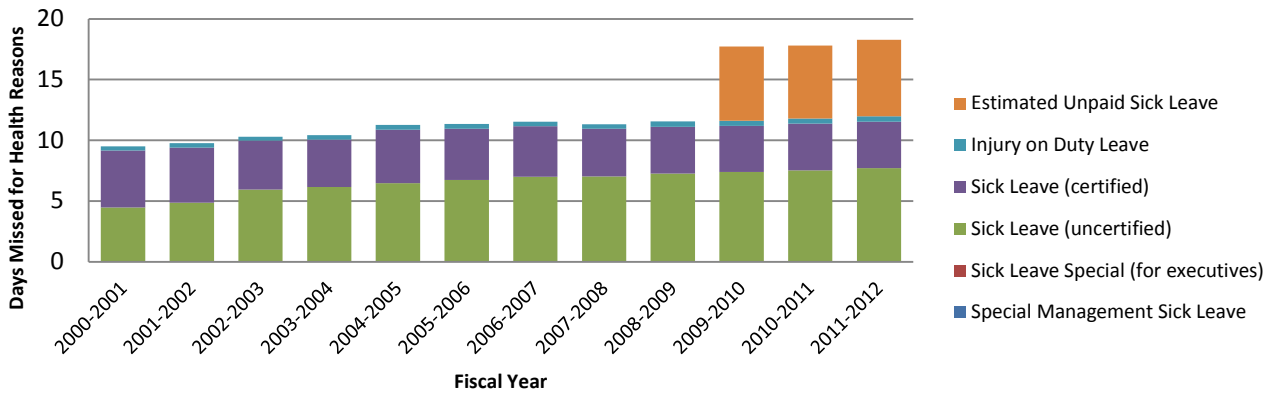


	2009-2010		2010-2011		2011-2012	
	TBS	VAC	TBS	VAC	TBS	VAC
Paid	12.4	11.5	12.4	11.5	13.3	11.5
Unpaid	10.2	7.4	9.9	10.2	10.8	10.8

Appendix C Treasury Board Secretariat Data for the Core Public Administration[17]

Fiscal year	Paid Sick leave (average leave in days/year)					Injury on Duty Leave	Estimated Unpaid Sick Leave	Total	Average Annualized Salary ($)
	Special Management Sick Leave	Sick Leave Special (for executives)	Sick Leave (uncertified)	Sick Leave (certified) [18]	Total				
2000-2001	N/A	N/A	4.48	4.67	9.15	0.35	Data unavailable	9.50	$ 47,069
2001-2002	N/A	N/A	4.87	4.52	9.39	0.37		9.76	$ 49,322
2002-2003	N/A	N/A	5.93	4.05	9.99	0.32		10.31	$ 52,903
2003-2004	N/A	N/A	6.16	3.89	10.06	0.37		10.43	$ 54,545
2004-2005	N/A	N/A	6.48	4.39	10.87	0.40		11.27	$ 56,065
2005-2006	N/A	N/A	6.72	4.23	10.95	0.39		11.34	$ 58,997
2006-2007	N/A	N/A	6.99	4.16	11.14	0.38		11.52	$ 60,847
2007-2008	N/A	0.00	7.03	3.92	10.96	0.37		11.33	$ 61,928
2008-2009	N/A	0.00	7.25	3.86	11.11	0.44		11.55	$ 62,311
2009-2010	N/A	0.01	7.38	3.80	11.18	0.43	6.10	17.71	$ 65,114
2010-2011	N/A	0.01	7.52	3.84	11.37	0.43	6.00	17.80	$ 67,273
2011-2012	0.00	0.01	7.69	3.83	11.52	0.44	6.30	18.26	$ 68,629

Figure 7 - CPA Health Related Leave



Source: Treasury Board Secretariat

[17] Data provided by TBS in response to PBO Information Request IR0126 (http://www.pbo-dpb.gc.ca/files/files/Response_IR0126_TBS_Mod_Sick_Leave_Benefits_EN.pdf).
[18] Certified sick leave denotes that a medical note was provided for the absence.

Appendix D Calculations

Share of Salary

In 2002: $Cost_{2002} = \frac{\overline{days}}{261} \times \sum wages_{CPI}$

$$Cost_{2002} = \frac{9.3}{261} \times 14.4B$$

$$Cost_{2002} = \$0.52B$$

In 2012: $Cost_{2012} = \frac{\overline{days}}{261} \times \sum wages$

$$Cost_{2012} = \frac{11.52}{261} \times 19.7B$$

$$Cost_{2012} = \$0.87B$$

Total Growth

$$Growth_{Total} = Cost_{2012} - Cost_{2002}$$

$$Growth_{Total} = 0.87B - 0.52B$$

$$Growth_{Total} = \$0.35B$$

Sick Growth Share

$$Growth_{Sick} = Cost_{2002} \times \frac{\overline{days_{2012}}}{\overline{days_{2002}}} - Cost_{2002}$$

$$Growth_{Sick} = 0.52B \times \frac{11.52}{9.39} - 0.52B$$

$$Growth_{Sick} = \$0.12B$$

Population Growth Share

$$Growth_{Pop} = Cost_{2002} \times \frac{Pop_{2012}}{Pop_{2002}} - Cost_{2002}$$

$$Growth_{Pop} = 0.52B \times \frac{278{,}092}{237{,}251} - 0.52B$$

$$Growth_{Pop} = \$0.09B$$

Wage Growth Share

$$Growth_{Wage} = Cost_{2002} \times \frac{\sum wages_{2012}}{\sum wages_{2002}} \times \frac{Pop_{2002}}{Pop_{2012}} - Cost_{2002}$$

$$Growth_{Wage} = 0.52B \times \frac{19.7B}{14.4B} \times \frac{237{,}251}{278{,}092} - 0.52B$$

$$Growth_{Wage} = \$0.09B$$

Interaction Growth Share

$$Growth_{Int} = Growth_{Total} - Growth_{Sick} - Growth_{Pop} - Growth_{Wage}$$

$$Growth_{Int} = 0.35B - 0.12B - 0.09B - 0.09B$$

$$Growth_{Int} = \$0.05B$$