



Physicians in Canada: Average Gross Fee-for-Service Payments, 2005–2006

Health Human Resources Database



Canadian Institute
for Health Information

Institut canadien
d'information sur la santé

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Preface

The Canadian Institute for Health Information (CIHI) collects and analyzes information on health and health care in Canada and makes it publicly available. Canada's federal, provincial and territorial governments created CIHI as a not-for-profit, independent organization dedicated to forging a common approach to Canadian health information. CIHI's goal: to provide timely, accurate and comparable information. CIHI's data and reports inform health policies, support the effective delivery of health services and raise awareness among Canadians of the factors that contribute to good health.

For more information, visit our website (www.cihi.ca).

Physicians in Canada: Average Gross Fee-for-Service Payments, 2005–2006 is produced by the Health Human Resources team at CIHI to support health human resource planning and utilization analysis.

The following two annual reports, *Full-Time Equivalent Physicians Report, Canada* and *Average Payment per Physician Report, Canada*, have been combined into one report beginning with the data year 2005–2006. By combining these publications, the average gross fee-for-service payment data can be presented in conjunction with the head counts and full-time-equivalent (FTE) counts of physicians receiving fee-for-service payments.

Previously published reports in the *Full-Time Equivalent Physicians* series are:

- *Full-Time Equivalent Physicians Report, Canada, 2004–2005 (2006)*
- *Full-Time Equivalent Physicians Report, Canada, 2002–2003 and 2003–2004 (2005)*
- *Full-Time Equivalent Physicians Report, Canada, 2002–2003 (2004)*
- *Full-Time Equivalent Physicians Report, Canada, 2001–2002 (2003)*
- *Full-Time Equivalent Physicians Report, Canada, 1999/2000 and 2000/2001 (2003)*
- *Full-Time Equivalent Physicians Report, Canada, 1998/1999 to 1999/2000 (2002)*
- *Full-Time Equivalent Physicians Report, Canada, 1996/97 to 1998/99 (2001)*
- *Full-Time Equivalent Physicians Report, Canada, 1993/94 to 1995/96 (1999)*
- *Full-Time Equivalent Physicians Report, Canada, 1989/90 to 1993/94 (1997)*

Full-Time Equivalent Physicians, Interprovincial Comparisons, Methodology and Statistics: Supplement 1990/91, produced in 1992 by the Health Information Division at Health Canada, contained figures derived from the Medical Care Databaseⁱ (MCDB), the predecessor of the National Physician Database (NPDB). In 1995, both databases were transferred to CIHI.

i. The MCDB was developed following the implementation of the *Medical Care Act* in 1967 and was used to monitor the services provided and payments made by the provincial and territorial medical insurance plans.

Previously published reports in the *Average Payment per Physician* series are:

- *Average Payment per Physician Report, Canada, 2004–2005 (2006)*
- *Average Payment per Physician Report, Canada, 2002–2003 and 2003–2004 (2005)*
- *Average Payment per Physician Report, Canada, 2002–2003 (2004)*
- *Average Payment per Physician Report, Canada, 2001–2002 (2003)*
- *Average Payment per Physician Report, Canada, 1999/2000 and 2000/2001 (2003)*
- *Average Payment per Physician Report, Canada, 1998/1999 and 1999/2000 (2002)*
- *Average Payment per Physician Report, Canada, 1996/97 to 1998/99 (2001)*
- *Average Payment per Physician Report, Canada, 1993/94 to 1995/96 (1999)*
- *Average Payment per Physician Report, Canada, 1989/90 to 1993/94 (1997)*

Average Fee Payments for Full-Time Physicians by Specialty, Canada by Province, 1985/86–1988/89 and Average Fee Payment Per Physician and Physician/Population Ratios, Canada by Province and Territory, 1981/82 to 1985/86 and 1986/87 Where Available, produced in 1991 and 1988, respectively, by the Health Information Division at Health Canada, contained figures derived from the Medical Care Database.

Introduction

The National Physician Database (NPDB) provides information on the demographic characteristics of physicians and fee-for-service utilization levels within the Canadian medical care system. Information on fee-for-service utilization levels includes total gross fee-for-service payments, total services, average payment per physician and full-time-equivalent physician counts.

The NPDB is used by federal, provincial and territorial governments, professional associations, consulting firms, pharmaceutical companies, researchers and the media for medical human resource planning, utilization analysis and policy development.

This publication presents the average gross fee-for-service payment per physician (APP), along with demographic information about these physicians, including physician full-time-equivalent (FTE) counts.

Specifically, the full-time-equivalent indicatorⁱⁱ was developed to:

- Provide a consistent basis for comparing physician supply across and within provinces and territories;
- Provide a consistent basis for measuring changes through time in physician supply; and
- Recognize workload differences among individual specialties.

By specialty, two average gross fee-for-service payment per physician calculations are presented in this report:

- Per physician who received at least \$60,000 in payments; and
- Per full-time-equivalent physician.

Figures on the number of physicians, population per physician and physician per population ratios are also included.

Full-time equivalent and average payment per physician figures include only fee-for-service data and should be used cautiously when determining physician supply requirements, as non-fee-for-service payments are not included in these calculations at this time.

Any questions regarding the publications or the NPDB should be directed to:

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ii. Please consult Appendix A for a detailed description of the development of the FTE methodology.

Highlights

Who are the physicians billing fee for service in Canada?

- Across Canada, 56,814 physicians billed at least one fee-for-service clinical payment in 2005–2006. This represented a total of 45,390 full-time equivalent physicians.
- Nationally, we know that fee-for-service billings represent 80% of total clinical payments. To begin to understand whether or not certain types of physicians are more likely to be billing fee for service, a comparative analysis was conducted between the data presented in this report and the national physician supply data from Scott's Medical Database (SMDB).
 - The proportion of family medicine physicians billing fee for service (54%) is higher than the national proportion of family medicine physicians (51%);ⁱⁱⁱ thus, family medicine physicians are more likely than specialists to bill fee for service.
 - The proportion of physicians billing fee for service by gender, age group and place of medical doctorate (MD) graduation is similar to SMDB's national profile; thus, there is very little difference in the likelihood of billing fee for service by these demographic characteristics.

Are there differences in workload patterns by type of physicians?

- Looking at the FTE-to-count ratio provides an estimate of the average workload^{iv} per physician. Nationally, the average workload per physician billing fee for service was 80% in 2005–2006.
 - Across jurisdictions, the average workload per physician ranged from 63% to 87%.
 - Nationally, the average workload by age groups are as follows:
 - › Less than 40 years of age—69%
 - › 40 to 59 years of age—86%
 - › 60 years of age and over—75%
- According to the full-time-equivalent methodology, another measure of workload is to compare the proportion of physicians working less than, equal to or more than one FTE. Nationally, 54% of physicians were working less than one FTE, while 30% were working more than one FTE.
 - A higher proportion of family medicine physicians were working less than one FTE (55%, versus 52% of specialists). Conversely, 32% of specialists were working more than one FTE, compared to 28% of family medicine physicians.

iii. Based on data from Scott's Medical Database (SMDB)/CIHI publication, *Supply, Distribution and Migration of Canadian Physicians*, which includes all "active" physicians in Canada.

iv. Workload is calculated based on fee-for-service billing data. Using billing data, information on FTE measurements are calculated, and workload is measured comparing FTE data to counts and/or evaluating the proportion of physicians falling below, at or above one FTE.

- By gender, the proportion of physicians working less than or more than one FTE varied considerably. Female physicians were more likely to work less than one FTE (68%, versus 47% for male physicians). At the other end of the spectrum, 36% of male physicians were working more than one FTE, compared to 16% of female physicians.
- Physicians aged 40 to 59 were the most likely to be working more than one FTE (35%), while those under 40 years of age were the least likely to be working more than one FTE (21%). The proportion of physicians aged 60 or more working more than one FTE was 26%.

On average, what are the gross fee-for-service billings physicians are submitting?

- The gross average fee-for-service billings per FTE physician were \$244,581 in 2005–2006. Removing physicians with less than \$60,000 in fee-for-service billings increases the gross average billing per physician to \$249,980.
 - The average gross billings for family medicine physicians were \$211,674 per FTE and \$212,368 per physician with a minimum of \$60,000 in fee-for-service billings.
 - The average gross billings for specialists were \$281,445 per FTE and \$293,450 per physician with a minimum of \$60,000 in fee-for-service billings.

Methodological Notes

Background

The establishment of the National Physician Database (NPDB) was approved in 1987 by the Conference of Deputy Ministers of Health upon the recommendation of the Advisory Committee on Health Human Resources. On August 1, 1995, the NPDB was transferred to the Canadian Institute for Health Information. CIHI assumed the responsibilities from Health Canada in maintaining the database. Previously, the NPDB was under the direction of the Working Group on Medical Care Statistics, which was disbanded when the database was transferred to CIHI.

The Advisory Group on Physician Databases was convened in April 1996 and regularly advises CIHI on data quality, methodology and product development matters relating to the NPDB and Scott's Medical Database (SMDB, formerly the Southam Medical Database). CIHI is currently working with the provinces, territories and ministries to also include data on clinical activities remunerated under alternative reimbursement plans (such as salaries, contracts and sessional fees) to improve comprehensiveness of physician payment information and service utilization.

Data Sources and Collection

NPDB Data

Data are derived from physician fee-for-service claims submitted by provincial and territorial medical insurance programs to CIHI. The claims data and associated physician and patient demographic data are submitted in five files, as listed below. Data files are usually received within six months of the end of the quarter to which the data correspond. Any files that do not meet appropriate layouts, as defined in the *NPDB Data Submission Specifications Manual*, are returned to the provinces and territories for correction and subsequent resubmission.

Files submitted include:

Title	Description
25 File	Dental services and other non-physician services file (file not submitted by all jurisdictions)
30 File	Reciprocal billing file*
35 File	Physician characteristics file
50 File	Utilization file (by fee-code, UPI, sex and age group of patient)
55 File	Changes to UPI file

Note:

* 30 File data are not applicable to the province of Quebec.

Two utilization files are used to create this report: the Utilization file (50 File) and the Reciprocal billing file (30 File). The Utilization file contains all direct payments for fee-for-service claims by physicians, laboratories and diagnostic facilities, as well as services received by medical care plan beneficiaries out of province or territory but not processed through the reciprocal billing system (that is, essentially services received out of Canada and in Quebec, as well as services excluded from the reciprocal billing agreement). The Reciprocal billing file contains data on out-of-province or -territory services processed by the Reciprocal Billing System. This means each province and territory sends data on services its physicians provided to out-of-province or -territory patients. Quebec does not participate in reciprocal billing arrangements.

In addition to the NPDB data files described above, CIHI gathers annual, aggregate-level, alternative payment information through a variety of information sources, including provincial and territorial representatives of CIHI’s Advisory Group on Physician Databases. A summary of this information is presented in Table 2 of the Payment Mode: Level of Fee-for-Service Coverage section.

For a complete description of NPDB record layouts, please see the *NPDB Data Submission Specifications Manual*, available at www.cihi.ca. For further information regarding the NPDB, including alternative payments, please contact the Program Lead, NPDB, CIHI.

Type of Data: Date of Service Versus Date of Payment

Generally, utilization data files are submitted on a date-of-payment basis for Newfoundland and Labrador, Manitoba and Saskatchewan and on a date-of-service basis for Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Alberta, British Columbia and the Yukon Territory. Provinces submitting on a date-of-service basis wait six months, or until 98% of services are captured, before submitting data files for processing. Please see Table 1 for a yearly breakdown by province of the type of data file submission.

Table 1. NPDB File Submission: Date of Service Versus Date of Payment

Province or Territory	2005–2006	
	DOS	DOP
N.L.		✓
P.E.I.	✓	
N.S.	✓	
N.B.	✓	
Que.	✓	
Ont.	✓	
Man.		✓
Sask.		✓
Alta.	✓	
B.C.	✓	
Y.T.	✓	

Type of Data: Billing Versus Payment Data

All jurisdictions, except Quebec, submit payment data. Billing data reflect the full amount the physician billed the provincial medical services plan for a particular fee code item. Payment data reflect what was actually paid to the physician. The amount paid would be the billed amount less any adjustments applied due to threshold values being met, income capping or clawbacks.

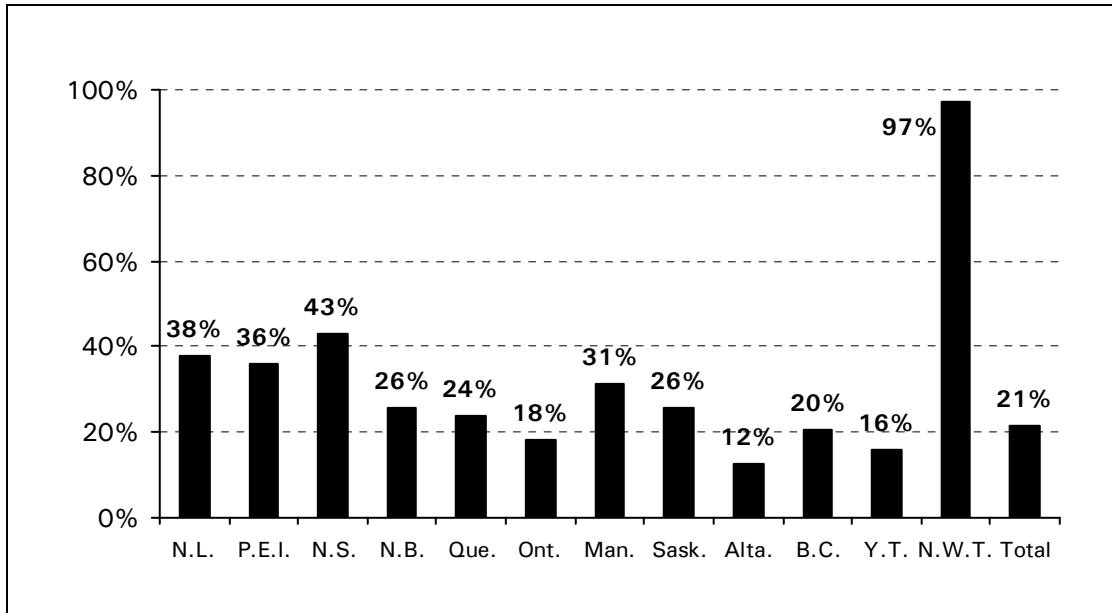
Starting with the 2001–2002 data year, payments for Ontario’s J, X and Y fee codes, with suffix B, are excluded from the calculations presented in this report. While claims for these fee codes include an associated physician identifier, they were typically paid directly to independent health facilities or hospital departments and not typically paid to the physician. Appendix B provides background information on this change in methodology and also summarizes how physician count results are affected by the change.

Payment Mode: Level of Fee-for-Service Coverage

Physician statistics in this report are based on fee-for-service billing and payment information, which preliminary data indicate to be approximately 79% of total clinical payments to physicians in Canada in 2005–2006. Alternative forms of reimbursement, such as salary and sessional payments, are currently not submitted comprehensively to the NPDB and are, therefore, not included in this report.

Preliminary data indicate that alternative payments in 2005–2006 are approximately \$2.99 billion—21.4% of the value of physicians’ clinical payments. As can be seen in Figure 1, the percentage of alternative payments varies considerably across Canada in 2005–2006, ranging from 12% in Alberta to 97% in the Northwest Territories. For further information on alternative payment programs in Canada and how these programs vary across jurisdictions, please see CIHI’s *The Status of Alternative Payment Programs for Physicians in Canada, 2004–2005, and Preliminary Information for 2005–2006*, available at www.cihi.ca.

Figure 1. Physicians' Alternative Clinical Payments in Canada, Preliminary, 2005–2006



Note: Data were not available for Nunavut.

Source: Provincial/territorial ministries of health.

In order to better understand fee-for-service coverage, Table 2 provides a summary of payment information submitted to the NPDB by province and indicates payment data that are included and excluded from FTE and average payment calculations. It is at each jurisdiction's discretion to determine which services will be billed through fee-for-service or alternative payment modes. Please note that the alternative payment information reported in Table 2 is only the data reported in the jurisdiction's data submission; it is not comprehensive of all alternative payment data.

Table 2. Payment Information Submitted to the NPDB and Inclusion/Exclusion Criteria Used to Produce Full-Time Equivalent and Average Payment Results, 2005–2006 (Current Dollars)

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
NPDB Payment Information Included in Average Payment and Full-Time Equivalent Calculations											
Medical care plan, fee-for-service payments	165,618,377	31,129,085	251,724,608	235,797,500	2,075,772,500	4,691,774,530	356,967,693	340,960,969	1,282,717,873	1,563,077,717	10,995,640,853
Reciprocal billing payments	1,509,860	340,511	6,375,552	3,404,492	NR	18,252,359	9,185,221	6,021,764	45,458,586	18,427,505	108,975,852
Subtotal—payments included in average payment and full-time equivalent calculations	167,128,238	31,469,596	258,100,160	239,201,992	2,075,772,500	4,710,026,889	366,152,914	346,982,734	1,328,176,459	1,581,505,223	11,104,616,705
NPDB Payment Information Excluded From Average Payment and Full-Time Equivalent Calculations											
Physicians with total payments less than or equal to \$0.00	(52)	0	0	(5,009)	0	0	(650)	(1,504)	0	0	(7,214)
All payments made to out of province, territory or country physicians*	419,071	0	0	14,549,577	9,860,511	77,098,264	0	761,768	0	3,637,821	106,327,012
Salary, sessional, and capitation payments†	NR	NR	NR	81,607,513	NR	NR	0	NR	NR	NR	81,607,513
Rural retention premiums‡	0	0	0	0	0	NR	0	NR	0	34,283,646	34,283,646
Worker's compensation board payments	0	0	0	0	59,273,106	0	0	0	0	25,980,424	85,253,530
Provincial/Territorial Insurance Corporation	0	0	0	0	0	0	0	0	0	8,120,827	8,120,827
Payments made to facilities and radiology/pathology specialists	22,947,127	2,972,955	3,611,589	33,168,739	262,429,726	1,674,368,870	52,147,351	22,645,639	195,761,577	450,808,503	2,720,862,074
Shadow billing	0	0	0	0	0	0	0	27,169,175	0	0	27,169,175
Subtotal—payments excluded from average payment and full-time equivalent calculations	23,366,147	2,972,955	3,611,589	129,320,820	331,563,343	1,751,467,134	52,146,701	50,575,078	195,761,577	522,831,221	3,063,616,563
Total Payment Information Submitted to the NPDB	190,494,385	34,442,551	261,711,749	368,522,812	2,407,335,843	6,461,494,023	418,299,616	397,557,812	1,523,938,035	2,104,336,443	14,168,133,268

Notes:

- * Includes payments made to out of province, territory or country physicians through all remuneration modes and sources of payment.
- † Excludes salary and sessional payments made to out of province, territory or country physicians.
- ‡ Includes rural retention premiums made through all sources of payment (for example, workers' compensation board, insurance corporation).

NR: not reported to the National Physician Database.

Source: NPDB, CIHI.

Population Data

Canadian population figures used in this publication are compiled by the Demography Division of Statistics Canada. Statistics Canada prepares, by special request, estimates of the “covered population” for use with the NPDB data. The covered population reflects people who received medical services paid for by provincial medical insurance programs. The covered population is the total population less members of the Royal Canadian Mounted Police, Canadian Armed Forces personnel and inmates in federal and provincial penitentiaries. These groups of people have their medical services covered by a federal medical insurance program. Estimates are for October 1 of the given year and are revised annually. See Appendix C for the net population data.

Note to Readers: Readers wishing further information on data provided through the cooperation of Statistics Canada may obtain copies of related publications by mail from: Publication Sales, Statistics Canada, Ottawa, Ontario K1A 0K9, or by calling 613-951-7277 or 1-800-267-6677 (toll free). Readers may also fax their orders to 613-951-1584.

Data Quality

Error/Validation Routines

The NPDB files are derived from provincial and territorial administrative systems, and edit checks are conducted on the data by the jurisdiction prior to processing the NPDB files. As CIHI has no control over provincial and territorial edit checks, all data files received by CIHI are processed through the NPDB error/validation routines. The error/validation routines are limited in scope because the data cannot be confirmed against the source. Error/validation routines include review of the total record counts, service counts and dollar amounts for each file, checking each value in the fields against acceptable values, checking for invalid fee codes, checking for unique physician identifier (UPI) numbers in illogical formats and logical review of the processed data. Any files that do not pass through the error/validation routines are returned to data providers for correction and subsequent resubmission.

Additional Data Quality Checks

Service counts, dollar amounts and other economic indicators are validated against previous years’ data and provincial and territorial annual reports.

Data providers are given the opportunity to review their own data for validity and consistency. This publication was reviewed and authorized by the provincial and territorial medical insurance plan authorization officers prior to publication. For a complete list of the provincial and territorial authorization officers, please see Appendix D.

Data Definitions

Fee-for-Service Physicians

A “fee-for-service physician” is defined as a physician who has billed at least one claim to the jurisdiction’s fee-for-service payment plan. Only the payments from the fee-for-service payment plan are included in this report. For example, if a physician billed \$1 in the fee-for-service plan and received \$200,000 from an alternative payment plan, only the \$1 appears in this report.

Province or Territory of Practice

“Province or territory of practice” is the jurisdiction where the physician is registered and receives payments from the provincial or territorial medical care plan. Physicians may practise in more than one jurisdiction in a given fiscal year. For example, the physician may move from one province to another during the fiscal year, or may provide services in two provinces on a regular basis (for example, a physician providing services in provincial border areas such as Ottawa–Gatineau). This can result in the double counting of physicians (except at the national level, where physician counts are not based on province or territory of practice).

Specialty

Physician specialty designations in the NPDB are assigned by the provincial medical care plans and grouped within the NPDB to a national equivalent. In most instances, two types are provided: the latest acquired certified specialty and the plan-payment specialty. The latter is used for the purposes of this report.

Internal medicine includes the sub-specialties such as cardiology, gastroenterology, hematology, rheumatology and medical oncology. Psychiatry includes neuropsychiatry. Neurology includes electro-encephalogram (EEG), and physical medicine includes electromyography. Specialists in the double specialty of ophthalmology/otolaryngology are included with ophthalmologists.

In some instances, jurisdictions have a unique way of grouping particular specialists. These unique groupings include the following:

- In Nova Scotia, Quebec and B.C., data for public health specialists are reported in the family medicine figures.
- For all provinces and territories other than Ontario, community medicine specialists are grouped with family medicine specialists. In Ontario, community medicine, public health, occupational medicine and pediatric cardiology are grouped as internal medicine specialists.
- For all provinces and territories other than Newfoundland and Labrador, Saskatchewan and B.C., non-certified specialists are grouped with family medicine specialists. In these jurisdictions, non-certified specialists are reported under their respective non-certified specialties rather than family medicine.
- Additionally, the very few plastic surgeons and urologists in P.E.I. are grouped into the general surgery category for privacy and confidentiality reasons.

Physicians in Quebec may have two different statuses that include two different specialties: one for in-province billings and one for billings outside Quebec. These two different statuses appear on the 35 File (Physician characteristics file) as two different records with the same UPI, which results in duplicate records on the file as far as individual physicians are concerned. Only the second record is retained on the NPDB system. This results in incorrect specialty assignment for some payments. Approximately 100 physicians per year are affected by this incorrect assignment.

For a complete listing of the specialty designations and their groupings please see Appendix E.

Unique Physician Identifier

A unique identifier is created by the province or territory using components of the physician's first and last names (scrambled using an algorithm), date of birth, gender and place of MD graduation.

Full-Time Equivalent

"FTE" is a measure that is used to estimate whether a physician is working full-time versus part-time. FTE physician counts are weighted physician counts. Physicians are weighted based on the total payments they receive. A physician's FTE value is calculated using his or her total payments in relation to set amounts that define upper and lower payment benchmarks for a medical specialty group within a jurisdiction. FTE values are calculated as follows:

$$FTE_i = \begin{cases} \text{total payments}_i / \text{lower benchmark}_j & \text{If physician } i \text{ earns less than} \\ & \text{the lower benchmark value} \\ 1 & \text{If physician } i \text{ earns an amount} \\ & \text{equal to or within the} \\ & \text{benchmark values} \\ 1 + \log (\text{total payments}_i / \text{upper benchmark}_j) & \text{If physician } i \text{ earns more than} \\ & \text{the upper benchmark value} \end{cases}$$

where:

- "FTE_i" is the FTE value assigned to the ith physician.
- "Total payments_i" is the sum of all payments made to the ith physician.
- "Lower benchmark_j" is the lower benchmark value set for the physician specialty group within the province or territory of practice of the ith physician.
- "Upper benchmark_j" is the upper benchmark value set for the physician specialty group within the jurisdiction of practice of the ith physician.

Please consult Appendix A for a complete discussion on the measurement of FTE physicians, including historical measures.

Average Gross Fee-for-Service Payment per Physician

The average gross fee-for-service payment per physician information represents average fee-for-service payments made to physicians who are remunerated through fee-for-service systems. Average payment results represent **gross fee-for-service** payments made to physicians. Payment figures do not represent net physician income (for example, personal income after making overhead payments). Also, non fee-for-service payments made to physicians are excluded from the figures.

Computations

Counts

All counts are based on the number of physicians receiving payments from each provincial plan on a fee-for-service basis. Canadian totals represent the sum of the provincial numbers. Concurrently registered physicians (that is, physicians receiving fee-for-service payments in more than one jurisdiction) will appear as separate physicians in each province. At the national level, physician counts will not be double-counted because the counts are not based on province or territory of practice.

Age

For the purposes of this report, physician age is as of the end of the fiscal year covered by this report, that is, March 31, 2006.

FTE Measure

1. Select a base year for estimation. Starting with the 2002–2003 data year, physician reports are produced using a 2000–2001 base year.
2. Create a national base year FTE database.
 - Select from the NPDB all the records for physicians who received at least one fee-for-service payment during each quarter of the base year, within one or more jurisdictions.
 - To eliminate the interprovincial differences in payments that are due to differences in fee levels, adjust the gross income of each physician by the relevant Physician Services Benefit Rates (PSBR) index.
 - Create 17 national-level medical specialty files corresponding to the medical specialty groups regularly reported in CIHI physician reports. Physicians are assigned to the single national medical specialty file that accounts for the majority of their payments. The national medical specialty data files contain each physician's total payments in the base year.

Note: FTE statistics are not calculated for physicians in the specialties of radiology or laboratory medicine. Physicians who receive payments under more than one specialty during the year are assigned to the specialty under which they receive the majority of their payments.

3. Calculate base year lower and upper benchmarks.
 - Within each specialty, rank the payment amounts and establish the distribution of physicians by payment levels.
 - Label the payment value corresponding to the 40th percentile rank as the national lower benchmark and the 60th percentile as the national upper benchmark.
 - To calculate the provincial lower and upper benchmarks, adjust the national benchmarks by the PSBR index.
4. Calculate the benchmarks for years other than the base year.
 - Inflate (or deflate for years prior to the base year) the provincial benchmarks for each specialty using specialty-specific annual fee increase percentages.
5. Create FTE database for estimation.
 - From the NPDB, select all the records for physicians who received at least one fee payment during a fiscal year for services provided within the physician's province of practice to in-province patients.
 - For each province and each specialty, create a data set that includes each physician's total billing in the fiscal year.
6. Calculate the FTE statistics.
 - Count physicians with payments within, or equal to, the benchmarks as one FTE.
 - Count physicians with payments below the lower benchmark as a fraction of an FTE equal to the ratio of their payments to the lower benchmark.
 - Count physicians with payments above the upper benchmark using a log-linear relationship, that is, as one FTE plus the logarithm of the ratio of their payments to the upper benchmark.

Please consult Appendix A for a complete discussion on the measurement of FTE physicians, including historical measures.

Average Gross Fee-for-Service Payment

All average gross fee-for-service payment figures are created based on a fiscal year (April 1 to March 31). Figures released in annual provincial reports may differ if they use the calendar year rather than the fiscal year.

Two types of physician counts are presented in this report: FTE values and simple head counts. These counts are used to calculate results for the two average payment series presented in this report: average gross fee-for-service payment per physician who received at least \$60,000 in payments and per FTE physician.

Average gross fee-for-service payment per physician who received at least \$60,000 in payments

Gross payment amounts are reported for each medical specialty group for each province. Average amounts are calculated as the sum of all gross fee-for-service payments made to physicians who receive at least \$60,000 in payments, divided by the number of physicians who receive at least \$60,000 in payments.

Physicians who receive payments under more than one specialty designation, possibly in multiple provinces, are assigned exclusively to the specialty in which most of their payments have been made when calculating their average payment for the “Total” column.

Average gross fee-for-service payment per full-time-equivalent physician

Gross payment amounts are reported for each medical specialty group for each province. Average payment amounts are calculated as the sum of all gross fee-for-service payments made to physicians divided by the sum of all physician FTE values.

FTE counts are the summation of physicians’ FTE values. FTE totals can be less than, equal to or greater than simple head count values. FTE counts provide an estimate of physician numbers, adjusting for variations in clinical workload. Physicians with earnings below lower benchmark payment values are counted as less than one physician, while those with earnings above upper benchmark payment values are counted as more than one physician. Physicians with earnings within or equal to the payment benchmarks are counted as exactly one physician (see FTE physician definition).

Physicians who receive payments in more than one province or territory are included in the average payment calculations for each jurisdiction they work in. In calculating national-level average gross fee-for-service payment per FTE physician results, payments are summed for each physician who works in multiple jurisdictions. For example, a physician who earns \$50,000 in one province and \$50,000 in another province will be included in the average payment calculations of each province. He or she will contribute \$50,000 to the numerator of each provincial equation and his or her province-specific FTE value to the denominator. For national-level calculations, this doctor would contribute \$100,000 to the numerator and the sum of his or her province-specific FTE values to the denominator.

Workload

The workload measure is determined by looking at the total head count of physicians versus the total number of full-time equivalent physicians. Workload is a way of measuring what capacity the workforce is operating at. For example, if the total head count of physicians were equal to the total number of full-time equivalent physicians, then the workload would be 100% (that is, the workforce would be operating at 100% capacity).

Data Limitations

Data Exclusions

The statistics presented in this report are based on gross fee-for-service payment information only; alternative forms of reimbursement are not included. Please see the Data Sources and Collection: Payment Mode: Level of Fee-for-Service Coverage section of this report for a complete discussion.

Medical services covered by third parties, such as hospital insurance and workers' compensation plans, are not included in this report. The data also exclude certain categories of persons. Members of the Armed Forces, the RCMP and inmates of federal and provincial penitentiaries are covered under other public programs (these persons account for less than half of one percent of the total population).

Certain payments made directly by patients are also omitted; for example, amounts extra-billed or balance-billed by physicians and the costs of plastic surgery for cosmetic purposes.

Yukon data are currently not included in *Physicians in Canada: Average Gross Fee-for-Service Payments* tables. At the present, FTE benchmarks have not been established for medical specialty groups within the Yukon. FTE benchmarks are required to perform calculations for both the average payment and FTE physician tables. CIHI will work to establish FTE benchmarks for the Yukon, thus permitting the inclusion of Yukon results within future reports.

Nunavut and Northwest Territories data are not included in this report as they do not submit data to the National Physician Database.

Negative Numbers

Data submitted to the NPDB may contain negative payment values. These negative payments are a result of adjustments or corrections applied by the provinces or territories. For the purposes of calculating average gross fee-for-service payments, both negative and positive payment amounts are included. If a physician's total billings sum to a negative number, that physician's data are excluded from this report.

Gross and Net Payments

Average payment figures presented in this report are not adjusted to account for overhead expenses incurred by physicians. Thus, average payment results reflect gross fee-for-service payments. Overhead expenses may vary across jurisdictions and across medical specialty groups. Other data sources, including the Canadian Medical Association's Physician Resource Questionnaire survey, may provide overhead expense information that can aid in the interpretation of average payment results presented in this report.

For individual physicians, gross income may include payments made through both fee-for-service and alternative payment systems. As noted above, the average payment results presented in this report reflect gross fee-for-service income, but not additional payments stemming from alternative payment sources.

For further information on gross/net payments, alternative payments and overhead expenses, please see CIHI's *Physician Databases Analytical Bulletin: Physician Expenditures, 2004:1*, available at www.cihi.ca.

Specialty Designations

Provinces and territories are requested to provide two types of specialty information on the NPDB files (latest acquired certified specialty and payment-plan specialty). The latest acquired certified specialty is the most recently acquired specialty designation from the Royal College of Physicians and Surgeons of Canada, the Collège des médecins du Québec and the College of Family Physicians of Canada. The payment plan specialty may or may not be different from the latest certified specialty and should reflect the specialty area in which the physician provides the majority of his or her services. The latest certified specialty is not provided by all provinces and territories.

For the purpose of this report, the payment-plan specialty is used. Physicians who practised under more than one specialty during the fiscal year were assigned the specialty under which they received the majority of their fee-for-service payments.

CIHI full-time-equivalent physician statistics and average gross fee-for-service payment per physician statistics may vary from provincial and territorial annual statistics because of differences in the way specialties are grouped to facilitate interprovincial comparability. For example, CIHI groups neuropsychiatry in with psychiatry, whereas Quebec groups it with neurology. CIHI includes electromyography with physical medicine, whereas Quebec does not. The subspecialties that constitute CIHI's internal medicine specialty are reported on individually in the Régie de l'assurance maladie du Québec annual statistics report. Please refer to Appendix E for CIHI specialty groupings.

Radiology and Pathology (Laboratory) Physicians

Radiologists, pathologists and laboratory directors are excluded from this report, as omitting such payments in all provinces improves interprovincial comparability. Payments for radiology and laboratory services performed by a physician who is neither a radiologist, pathologist nor laboratory director are included. Medical care plan fee payments to radiologists or pathologists are nil or very small in the four Atlantic provinces, relatively small in Quebec, but substantial in other jurisdictions. See Appendix F for information on the extent of fee-for-service payments for radiology and laboratory services that are included in the NPDB data files, but excluded from this report.

Privacy and Confidentiality

CIHI employs a variety of safeguards to protect the privacy and confidentiality of physician data. These include:

Unique Physician Identifier

Physician names are not used on the provincial and territorial files. Instead, a unique physician identifier (UPI) is generated by the data provider using components of the physician's name, date of birth, gender and place of MD graduation. The name portion of the UPI is scrambled using an algorithm known only to the province or territory. This algorithm is the same across jurisdictions. The UPI helps protect the privacy and confidentiality of the physician and allows for the tracking of the physician throughout his or her career in Canada.

Data Suppression

In preparing this report, CIHI suppresses data for medical specialty groups consisting of one to four physicians within a jurisdiction. Suppressed data are excluded from all counts, both FTE and head counts. Suppressed data are excluded from results reported within jurisdictions as well as for results reported in the "Total" column.

Furthermore, if the application of selection criteria (that is, physicians with earnings greater than \$60,000) produces physician groups between one and four, the corresponding data are also suppressed. Suppressed data are excluded from all average payment calculations within a jurisdiction. Therefore, in order to avoid residual disclosure, suppressed data are not included in column subtotals and totals.

Some physicians work in more than one jurisdiction and may have their information suppressed in one jurisdiction (where physician counts are between one and four) but not in another (where physician counts are greater than four). For physicians who work in multiple jurisdictions, and where their payments are included in the average payment results for at least one jurisdiction, their payments from all jurisdictions are included in results presented in the "Total" column for the Average gross fee-for-service payment who received at least \$60,000 indicator. Again, this rule applies only to physicians who practice in multiple jurisdictions.

NPDB Data Access/Release Policy

CIHI's Privacy and Legal Services has developed a set of guidelines to safeguard the privacy and confidentiality of data received by CIHI. The document *Privacy and Confidentiality of Health Information at CIHI: Principles and Policies for the Protection of Personal Health Information* may be obtained from the CIHI website (www.cihi.ca). These policies govern the release of data for all provinces except Quebec and Newfoundland and Labrador in publications, media releases, the CIHI website and through ad hoc requests and special studies. In compliance with these guidelines, CIHI prevents residual disclosure by implementing cell suppression for cells with counts from one to four. These policies ensure the privacy and confidentiality of all health care providers and recipients.

The release of data from the NPDB for the provinces of Quebec and Newfoundland and Labrador is governed by the NPDB Data Access/Release Policy, which was established by the provincial and territorial ministries of health and is administered by CIHI. Depending on the type of client, the level of data aggregation, the province or territory and indicator of interest, CIHI may not be able to release data to the client without prior approval from the province or territory.

Products and Services

There are three types of products that are generated from the NPDB: “ad hoc requests,” “publications” and “special projects.” Ad hoc requests are generally short queries that do not require major programming resources. Service counts and dollar amounts by specific fee codes or procedures are the most common forms of ad hoc request. Most ad hoc requests can be handled through standard reports that are generated annually.

This year, the Full-Time Equivalent and Average Payment per Physician reports have been merged in order to more concisely present related indicators.

Other NPDB products currently available include:

- *National Grouping System Categories Report, Canada*
- *Reciprocal Billing Report, Canada*
- *The Status of Alternative Payment Programs for Physicians in Canada*

For details on publication years and reporting periods covered by these reports, please refer to the CIHI website (www.cihi.ca).

Special projects generally require project planning and the commitment of extra resources. Please contact Health Human Resources at CIHI for costs associated with these products and services.

Data Tables

Table 1. Physicians' Fee-for-Service Counts and Full-Time Equivalent by Gender, Province and Specialty, 2005–2006

	Family Medicine			Total Specialties			Total Physicians		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
N.L.	Count 400	187	587	337	103	440	737	290	1,027
	FTE 278.45	103.93	382.38	241.67	46.46	288.13	520.12	150.39	670.51
P.E.I.	Count 94	27	121	57	12	69	151	39	190
	FTE 72.18	17.71	89.89	40.26	4.90	45.16	112.44	22.61	135.05
N.S.	Count 572	402	974	499	145	644	1,071	547	1,618
	FTE 415.85	235.98	651.83	292.29	68.72	361.01	708.14	304.70	1,012.84
N.B.	Count 443	288	731	472	122	594	915	410	1,325
	FTE 307.26	159.02	466.28	339.89	62.16	402.05	647.15	221.18	868.33
Que.	Count 4,069	3,175	7,244	4,577	2,075	6,652	8,646	5,250	13,896
	FTE 3,455.34	2,034.04	5,489.38	3,936.44	1,497.63	5,434.07	7,391.78	3,531.67	10,923.45
Ont.	Count 7,401	3,789	11,190	7,657	2,655	10,312	15,058	6,444	21,502
	FTE 6,740.06	2,633.75	9,373.81	7,359.06	1,958.83	9,317.89	14,099.12	4,592.58	18,691.70
Man.	Count 658	298	956	686	243	929	1,344	541	1,885
	FTE 568.30	173.09	741.39	589.20	173.39	762.59	1,157.50	346.48	1,503.98
Sask.	Count 692	295	987	464	137	601	1,156	432	1,588
	FTE 583.72	170.89	754.61	412.38	88.67	501.05	996.10	259.56	1,255.66
Alta.	Count 2,098	1,146	3,244	1,779	599	2,378	3,877	1,745	5,622
	FTE 1,890.55	730.73	2,621.28	1,397.40	334.15	1,731.55	3,287.95	1,064.88	4,352.83
B.C.	Count 3,221	1,616	4,841	2,540	766	3,308	5,761	2,382	8,149
	FTE 2,515.08	893.85	3,411.53	2,077.33	482.27	2,561.00	4,592.41	1,376.12	5,972.53
Total	Count 19,648	11,223	30,875	19,068	6,857	25,927	38,716	18,080	56,802
	FTE 16,826.79	11,223	23,982.38	16,685.92	4,717.18	21,404.50	33,512.71	11,870.17	45,386.88

Notes:

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Details may not add to total because of suppressed data and unknowns being excluded.

Please refer to the Data Sources and Collection: Payment Mode section of this report to see variations of fee-for-service coverage by jurisdiction.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 2. Physicians' Fee-for-Service Counts and Full-Time Equivalent by Age, Province and Specialty, 2005–2006

	Family Medicine			Total Specialties			Total Physicians						
	<40	40 to 59	60 +	Total	<40	40 to 59	60 +	Total	<40	40 to 59	60 +	Total	
N.L.	Count	225	291	70	587	102	258	79	440	327	549	149	1,027
	FTE	104.19	220.84	56.22	382.38	52.89	182.28	52.87	288.13	157.08	403.12	109.09	670.51
P.E.I.	Count	33	66	21	121	11	40	15	69	44	106	36	190
	FTE	20.11	54.95	14.83	89.89	1.87	33.18	10.06	45.16	21.98	88.13	24.89	135.05
N.S.	Count	234	610	129	974	139	366	134	644	373	976	263	1,618
	FTE	110.04	445.80	95.45	651.83	63.33	222.65	71.05	361.01	173.37	668.45	166.50	1,012.84
N.B.	Count	225	411	95	731	192	267	133	594	417	678	228	1,325
	FTE	103.81	296.71	65.76	466.28	123.50	202.28	75.30	402.05	227.31	498.99	141.06	868.33
Que.	Count	1,786	4,609	847	7,244	1,586	3,544	1,518	6,652	3,372	8,153	2,365	13,896
	FTE	1,297.05	3,588.26	601.85	5,489.38	1,237.97	3,116.39	1,076.89	5,434.07	2,535.02	6,704.65	1,678.74	10,923.45
Ont.	Count	2,462	6,429	2,219	11,190	2,241	5,586	2,430	10,312	4,703	12,015	4,649	21,502
	FTE	1,642.30	5,892.81	1,831.28	9,373.81	1,809.31	5,559.48	1,942.65	9,317.89	3,451.61	11,452.29	3,773.93	18,691.70
Man.	Count	259	533	163	956	188	537	204	929	447	1,070	367	1,885
	FTE	159.84	446.97	134.57	741.39	135.10	473.79	153.70	762.59	294.94	920.76	288.27	1,503.98
Sask.	Count	293	501	192	987	124	337	140	601	417	838	332	1,588
	FTE	167.72	425.58	160.31	754.61	94.85	297.50	108.70	501.05	262.57	723.08	269.01	1,255.66
Alta.	Count	949	1,853	422	3,244	636	1,382	344	2,378	1,585	3,235	766	5,622
	FTE	696.73	1,596.02	312.98	2,621.28	392.36	1,094.67	233.29	1,731.55	1,089.09	2,690.69	546.27	4,352.83
B.C.	Count	1,063	2,991	776	4,841	692	1,868	737	3,308	1,755	4,859	1,513	8,149
	FTE	622.29	2,274.10	508.65	3,411.53	495.54	1,587.43	467.56	2,561.00	1,117.83	3,861.53	976.21	5,972.53
Total	Count	7,529	18,294	4,934	30,875	5,911	14,185	5,734	25,927	13,440	32,479	10,668	56,802
	FTE	4,924.08	15,242.04	3,781.90	23,982.38	4,406.72	12,769.65	4,192.07	21,404.50	9,330.80	28,011.69	7,973.97	45,386.88

Notes:

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Details may not add to total because of suppressed data and unknowns being excluded.

Please refer to the Data Sources and Collection: Payment Mode section of this report to see variations

of fee-for-service coverage by jurisdiction.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 3. Physicians' Fee-for-Service Counts and Full-Time Equivalent by Place of Graduation, Province and Specialty, 2005–2006

	Family Medicine			Total Specialists			Total Physicians						
	Canada	Other	Unknown	Canada	Other	Unknown	Canada	Other	Unknown	Total			
N.L.	Count	339	244	4	587	226	209	5	440	565	453	9	1,027
	FTE	257.87	122.96	1.55	382.38	166.37	118.26	3.50	288.13	424.24	241.22	5.05	670.51
P.E.I.	Count	102	15	4	121	51	11	7	69	153	26	11	190
	FTE	82.59	6.85	0.45	89.89	36.11	6.33	2.72	45.16	118.70	13.18	3.17	135.05
N.S.	Count	728	235	11	974	443	191	10	644	1,171	426	21	1,618
	FTE	484.59	161.25	5.99	651.83	252.26	102.28	6.47	361.01	736.85	263.53	12.46	1,012.84
N.B.	Count	624	86	21	731	403	170	21	594	1,027	256	42	1,325
	FTE	416.71	43.50	6.07	466.28	304.71	91.36	5.98	402.05	721.42	134.86	12.05	868.33
Que.	Count	6,591	21	632	7,244	5,710	63	879	6,652	12,301	84	1,511	13,896
	FTE	4,968.39	18.05	502.94	5,489.38	4,702.46	48.24	683.37	5,434.07	9,670.85	66.29	1,186.31	10,923.45
Ont.	Count	8,880	2,252	58	11,190	7,512	2,742	58	10,312	16,392	4,994	116	21,502
	FTE	7,085.53	2,234.69	53.59	9,373.81	6,656.33	2,612.32	49.24	9,317.89	13,741.86	4,847.01	102.83	18,691.70
Man.	Count	534	422	0	956	715	213	1	929	1,249	635	1	1,885
	FTE	393.02	348.37	0.00	741.39	589.62	171.53	1.44	762.59	982.64	519.90	1.44	1,503.98
Sask.	Count	369	616	2	987	333	267	1	601	702	883	3	1,588
	FTE	249.30	503.32	1.99	754.61	273.26	227.73	0.06	501.05	522.56	731.05	2.05	1,255.66
Alta.	Count	2,179	1,039	26	3,244	1,783	565	30	2,378	3,962	1,604	56	5,622
	FTE	1,677.49	922.54	21.25	2,621.28	1,275.34	436.21	20.00	1,731.55	2,952.83	1,358.75	41.25	4,352.83
B.C.	Count	3,502	1,240	99	4,841	2,300	924	84	3,308	5,802	2,164	183	8,149
	FTE	2,352.99	987.99	70.55	3,411.53	1,770.82	715.04	75.14	2,561.00	4,123.81	1,703.03	145.69	5,972.53
Total	Count	23,848	6,170	857	30,875	19,476	5,355	1,096	25,927	43,324	11,525	1,953	56,802
	FTE	17,968.48	5,349.52	664.38	23,982.38	16,027.28	4,529.30	847.92	21,404.50	33,995.76	9,878.82	1,512.30	45,386.88

Notes:

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Please refer to the Data Sources and Collection: Payment Mode section of this report to see variations of fee-for-service coverage by jurisdiction.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 4.1. Physicians' Fee-for-Service Full-Time Equivalent Distribution by Gender and Specialty, 2005–2006

	Less than 1 FTE	1 FTE	More than 1 FTE
Family Medicine	55.0%	16.9%	28.1%
Male	46.3%	17.7%	35.9%
Female	70.2%	15.4%	14.4%
Medical Specialists	52.2%	17.0%	30.7%
Male	46.2%	16.9%	36.9%
Female	66.0%	17.5%	16.5%
Surgical Specialists	50.9%	14.5%	34.5%
Male	48.7%	13.7%	37.6%
Female	60.8%	18.1%	21.1%
Total Specialists	51.8%	16.2%	31.9%
Male	47.1%	15.8%	37.1%
Female	64.9%	17.6%	17.5%
Total Physicians	53.5%	16.6%	29.9%
Male	46.7%	16.8%	36.5%
Female	68.2%	16.2%	15.6%

Notes:

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Benchmarks are based on the 40th and 60th percentiles.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 4.2. Physicians' Fee-for-Service Full-Time Equivalent Distribution by Age and Specialty, 2005–2006

	Less than 1 FTE	1 FTE	More than 1 FTE
Family Medicine			
<40	55.0%	16.9%	28.1%
40–59	66.6%	14.9%	18.5%
60+	49.7%	17.9%	32.4%
	56.4%	16.3%	27.3%
Medical Specialists			
<40	52.2%	17.0%	30.7%
40–59	60.9%	16.5%	22.6%
60+	47.6%	17.3%	35.1%
	54.7%	17.0%	28.3%
Surgical Specialists			
<40	50.9%	14.5%	34.5%
40–59	54.4%	14.6%	31.0%
60+	39.6%	16.3%	44.2%
	70.5%	11.1%	18.4%
Total Specialists			
<40	51.8%	16.2%	31.9%
40–59	58.8%	15.9%	25.2%
60+	45.2%	17.0%	37.8%
	60.5%	14.8%	24.7%
Total Physicians			
<40	53.5%	16.6%	29.9%
40–59	63.2%	15.4%	21.5%
60+	47.7%	17.5%	34.8%
	58.6%	15.5%	25.9%

Notes:

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Benchmarks are based on the 40th and 60th percentiles.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 4.3. Physicians' Fee-for-Service Full-Time-Equivalent Distribution by Gender, Age and Specialty, 2005–2006

	Male		Female		Total	
	Less than 1 FTE	More than 1 FTE	Less than 1 FTE	More than 1 FTE	Less than 1 FTE	More than 1 FTE
Family Medicine						
<40	46.3%	17.7%	70.2%	15.4%	55.0%	16.9%
40–59	55.1%	16.2%	76.9%	13.7%	66.6%	14.9%
60+	40.4%	18.6%	66.3%	16.6%	49.7%	17.9%
	54.5%	16.8%	68.6%	12.7%	56.4%	16.3%
Medical Specialists						
<40	46.2%	16.9%	66.0%	17.5%	52.2%	17.0%
40–59	50.6%	17.3%	73.6%	15.6%	60.9%	16.5%
60+	41.1%	16.7%	62.0%	18.6%	47.6%	17.3%
	53.6%	16.9%	62.8%	17.3%	54.7%	17.0%
Surgical Specialists						
<40	48.7%	13.7%	60.8%	18.1%	50.9%	14.5%
40–59	46.8%	13.9%	68.9%	16.0%	54.4%	14.6%
60+	36.2%	15.4%	54.0%	20.1%	39.6%	16.3%
	70.7%	11.0%	66.1%	13.6%	70.5%	11.1%
Total Specialists						
<40	47.1%	15.8%	64.9%	17.6%	51.8%	16.2%
40–59	49.3%	16.1%	72.4%	15.7%	58.8%	15.9%
60+	39.5%	16.3%	60.3%	18.9%	45.2%	17.0%
	60.2%	14.6%	63.1%	16.9%	60.5%	14.8%
Total Physicians						
<40	46.7%	16.8%	68.2%	16.2%	53.5%	16.6%
40–59	52.2%	16.2%	75.2%	14.5%	63.2%	15.4%
60+	39.9%	17.5%	64.1%	17.5%	47.7%	17.5%
	57.6%	15.6%	66.2%	14.6%	58.6%	15.5%

Notes:

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Benchmarks are based on the 40th and 60th percentiles.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB; CIHI.

Table 5.1. Physicians' Fee-for-Service Full-Time-Equivalent Counts by Type of Practice, 2005–2006

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	382.38	89.89	651.83	466.28	5,489.38	9,373.81	741.39	754.61	2,621.28	3,411.53	23,982.38
Medical Specialties	183.96	20.59	186.80	222.37	3,772.33	6,399.84	533.67	289.29	1,126.02	1,738.27	14,473.14
Internal Medicine	84.64	11.75	80.03	99.66	1,550.30	2,480.45	181.30	125.95	303.55	608.91	5,526.54
Neurology	4.96	*	8.49	10.48	196.90	226.80	20.07	17.55	43.08	71.51	599.84
Psychiatry	26.53	*	41.82	25.14	843.37	1,690.82	120.43	40.59	364.13	453.21	3,606.04
Pediatrics	26.31	6.30	15.49	27.16	457.54	735.26	86.98	23.84	155.16	170.59	1,704.63
Dermatology	6.36	*	8.06	6.49	163.32	168.83	11.57	4.57	47.77	49.61	466.58
Physical Medicine	n/a	n/a	5.30	3.61	84.41	143.92	11.72	3.19	16.55	22.79	291.49
Anesthesia	35.16	2.54	27.61	49.83	476.49	953.76	101.60	73.60	195.78	361.65	2,278.02
Surgical Specialties	104.17	24.57	174.21	179.68	1,661.74	2,918.05	228.92	211.76	605.53	822.73	6,931.36
General Surgery	28.60	10.55	37.99	33.60	374.75	625.89	60.26	54.23	129.34	154.03	1,509.24
Thoracic/Cardiovascular Surgery	2.95	n/a	*	8.33	47.32	97.94	13.63	9.28	23.91	47.07	250.43
Urology	8.05	*	18.52	17.75	137.99	223.85	11.37	10.99	38.11	61.32	527.95
Orthopedic Surgery	11.68	4.66	16.70	31.63	228.05	432.04	37.40	32.38	100.17	133.48	1,028.19
Plastic Surgery	4.73	†	5.85	12.35	73.20	174.28	13.89	13.24	42.01	53.36	392.91
Neurosurgery	*	n/a	0.63	0.87	42.54	59.51	*	5.75	1.62	31.82	142.74
Ophthalmology	13.44	3.56	46.77	30.03	258.42	439.95	27.79	36.08	93.97	157.40	1,107.41
Otolaryngology	14.03	*	9.52	15.43	154.50	215.40	13.08	15.06	43.03	59.27	539.32
Obstetrics/Gynecology	20.69	5.80	38.23	29.69	344.97	649.19	51.50	34.75	133.37	124.98	1,433.17
Total Specialties	288.13	45.16	361.01	402.05	5,434.07	9,317.89	762.59	501.05	1,731.55	2,561.00	21,404.50
Total Physicians	670.51	135.05	1,012.84	868.33	10,923.45	18,691.70	1,503.98	1,255.66	4,352.83	5,972.53	45,386.88

Notes:

* Data have been suppressed. Please see the Methodological Notes, Data Suppression section for details.

† Prince Edward Island plastic surgeons are included with general surgeons.

n/a = Not Applicable—There were no physicians for this specialty for this province.

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 5.2. Average Gross Fee-for-Service Payment per Full-Time-Equivalent Physician by Type of Practice, 2005–2006

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	204,008	188,052	212,413	231,848	171,218	211,584	212,735	232,524	267,060	228,180	211,671
Medical Specialties	262,508	230,315	258,881	271,898	180,321	259,514	230,623	296,756	308,392	262,345	242,873
Internal Medicine	268,113	275,167	280,041	309,475	223,193	330,988	274,993	352,439	355,704	322,019	297,563
Neurology	278,905	*	320,371	216,750	176,729	248,502	234,303	221,742	277,056	285,709	230,884
Psychiatry	191,863	*	167,429	195,504	96,855	165,210	165,464	196,342	222,833	195,272	159,612
Pediatrics	198,266	95,051	239,249	236,610	151,078	203,898	185,443	255,123	251,535	218,019	195,598
Dermatology	340,194	*	509,344	414,435	260,641	306,927	330,086	414,343	469,709	367,500	320,904
Physical Medicine	n/a	n/a	236,824	153,111	115,554	184,576	171,104	184,324	253,571	241,957	173,008
Anesthesia	334,030	358,327	259,293	256,160	202,074	289,222	262,172	285,788	411,397	249,075	273,486
Surgical Specialties	374,944	343,553	403,950	393,110	274,208	365,255	370,477	404,558	463,863	421,810	361,891
General Surgery	304,464	321,892	355,466	366,664	264,983	344,316	339,446	388,845	423,750	371,931	335,515
Thoracic/Cardiovascular Surgery	458,141	n/a	*	527,120	358,661	498,993	445,856	552,908	640,462	463,420	478,858
Urology	414,708	*	427,793	404,121	288,022	369,711	423,052	427,638	452,021	438,853	368,567
Orthopedic Surgery	527,753	340,911	344,209	342,365	233,827	331,987	341,124	343,779	419,732	355,289	325,274
Plastic Surgery	384,215	†	328,991	321,537	204,047	270,541	314,936	339,350	412,762	280,366	282,423
Neurosurgery	*	n/a	222,963	284,392	177,881	351,116	*	295,366	311,548	371,624	300,393
Ophthalmology	490,504	449,872	501,382	494,143	322,982	435,914	521,227	515,497	611,403	590,058	456,146
Otolaryngology	383,604	*	445,447	395,668	290,966	371,016	377,334	370,630	505,314	416,995	366,341
Obstetrics/Gynecology	275,712	319,820	351,600	362,354	276,535	362,796	328,437	381,230	408,250	393,852	346,444
Total Specialties	303,158	291,924	328,886	326,069	209,032	292,629	272,605	342,317	362,761	313,574	281,415
Total Physicians	246,615	222,786	253,928	275,474	190,029	251,985	243,092	276,335	305,129	264,797	244,562

Notes:

* Data have been suppressed. Please see the Methodological Notes, Data Suppression section for details.

† Prince Edward Island plastic surgeons are included with general surgeons.

n/a = Not Applicable – There were no physicians for this specialty for this province.

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Payment figures do not represent net physician income, please see methodology.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 6.1. Counts of Physicians Who Received at Least \$60,000 in Fee-for-Service Payments by Type of Practice, 2005–2006

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	340	68	693	497	5,392	8,352	670	695	2,781	3,760	23,204
Medical Specialties	143	10	199	198	3,360	5,494	522	268	1,136	1,771	13,054
Internal Medicine	66	10	85	83	1,510	2,140	198	114	279	580	5,036
Neurology	5	n/a	6	7	159	211	20	14	49	77	547
Psychiatry	20	*	41	18	552	1,383	112	35	310	488	2,960
Pediatrics	14	*	17	26	380	572	72	23	163	175	1,438
Dermatology	6	*	13	8	171	159	13	5	35	56	463
Physical Medicine	n/a	n/a	6	*	52	116	10	*	24	27	235
Anesthesia	32	*	31	56	536	913	97	77	276	368	2,375
Surgical Specialties	88	20	188	191	1,836	2,714	236	187	623	951	7,016
General Surgery	23	8	41	36	455	597	57	55	140	175	1,585
Thoracic/Cardiovascular Surgery	*	n/a	*	9	57	103	14	7	23	59	272
Urology	9	n/a	19	20	145	207	17	12	42	65	535
Orthopedic Surgery	14	*	18	33	250	389	37	29	111	166	1,045
Plastic Surgery	*	†	6	13	79	159	10	12	45	58	382
Neurosurgery	*	n/a	*	*	45	48	*	*	*	32	125
Ophthalmology	15	5	49	26	254	366	30	26	86	163	1,013
Otolaryngology	11	*	13	16	174	211	18	13	40	70	562
Obstetrics/Gynecology	16	7	42	38	377	634	53	33	136	163	1,497
Total Specialties	231	30	387	389	5,196	8,208	758	455	1,759	2,722	20,070
Total Physicians	571	98	1,080	886	10,588	16,560	1,428	1,150	4,540	6,482	43,274

Notes:

* Data have been suppressed. Please see the Methodological Notes, Data Suppression section for details.

† Prince Edward Island plastic surgeons are included with general surgeons.

n/a = Not Applicable—There were no physicians for this specialty for this province.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 6.2. Average Gross Fee-for-Service Payment per Physician Who Received at Least \$60,000 in Payments by Type of Practice, 2005–2006

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	218,720	237,003	192,613	210,333	167,281	230,358	226,963	246,186	247,139	201,139	212,352
Medical Specialties	323,424	317,048	222,875	287,890	190,854	296,135	229,358	311,264	299,291	251,947	261,339
Internal Medicine	337,411	317,048	231,772	361,454	221,344	378,183	243,546	381,541	375,718	333,969	319,651
Neurology	244,232	n/a	424,046	312,634	207,202	260,859	229,230	276,164	234,032	260,397	245,070
Psychiatry	237,535	*	153,635	212,222	118,429	193,317	171,194	219,096	256,895	174,631	182,449
Pediatrics	318,476	*	211,259	224,727	167,828	252,278	215,233	249,912	229,642	202,303	220,118
Dermatology	360,603	*	307,914	324,019	246,855	322,655	293,776	375,803	637,723	322,180	320,844
Physical Medicine	n/a	n/a	193,821	*	174,093	221,060	192,065	*	170,395	183,882	199,292
Anesthesia	355,824	*	227,450	224,249	174,783	300,116	273,277	269,631	290,664	241,347	259,261
Surgical Specialties	395,929	339,101	369,683	363,747	244,937	388,936	356,295	446,269	447,734	360,761	353,159
General Surgery	362,058	416,046	327,217	332,870	214,237	356,531	353,570	378,572	389,216	323,540	315,484
Thoracic/Cardiovascular Surgery	*	n/a	*	483,043	295,802	469,472	434,005	732,998	663,096	367,618	432,928
Urology	370,933	n/a	416,824	354,907	272,340	395,740	281,385	391,488	407,247	411,504	361,178
Orthopedic Surgery	433,159	*	312,419	325,224	208,772	363,971	339,137	383,636	376,162	281,792	314,602
Plastic Surgery	*	†	319,568	305,460	183,106	294,027	430,210	369,797	384,406	253,326	282,538
Neurosurgery	*	n/a	*	*	162,751	429,266	*	*	*	367,423	317,744
Ophthalmology	437,079	320,228	474,472	566,073	325,732	521,587	482,830	710,872	665,205	566,522	496,314
Otolaryngology	483,251	*	322,018	381,407	256,609	375,890	274,174	429,361	543,591	347,813	349,396
Obstetrics/Gynecology	327,492	264,645	314,011	276,922	250,686	367,975	317,024	399,230	397,712	295,150	328,125
Total Specialties	351,045	331,750	294,192	325,136	209,964	326,820	268,879	366,750	351,866	289,964	293,437
Total Physicians	272,253	266,007	229,012	260,738	188,227	278,170	249,212	293,887	287,715	238,439	249,959

Notes:

* Data have been suppressed. Please see the Methodological Notes, Data Suppression section for details.

† Prince Edward Island plastic surgeons are included with general surgeons.

n/a = Not Applicable — There were no physicians for this specialty for this province.

Based on gross payments.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Payment figures do not represent net physician income, please see methodology.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 7.1. Population per Full-Time-Equivalent Physician, Based on Fee-for-Service Billings, by Type of Practice, 2005–2006

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	1,346	1,537	1,431	1,590	1,385	1,340	1,583	1,312	1,247	1,248	1,342
Medical Specialties	2,797	6,708	4,994	3,335	2,015	1,963	2,199	3,423	2,904	2,450	2,224
Internal Medicine	6,080	11,755	11,656	7,440	4,904	5,064	6,473	7,863	10,773	6,994	5,824
Neurology	103,752	*	109,874	70,755	38,610	55,388	58,474	56,430	75,906	59,550	53,654
Psychiatry	19,397	*	22,306	29,495	9,014	7,430	9,745	24,399	8,980	9,396	8,925
Pediatrics	19,559	21,924	60,221	27,302	16,616	17,085	13,493	41,542	21,075	24,963	18,890
Dermatology	80,913	*	115,736	114,255	46,549	74,406	101,433	216,708	68,454	85,838	68,978
Physical Medicine	n/a	n/a	176,005	205,405	90,065	87,285	100,135	310,456	197,585	186,856	110,412
Anesthesia	14,636	54,378	33,786	14,881	15,955	13,171	11,551	13,456	16,703	11,775	14,128
Surgical Specialties	4,940	5,622	5,355	4,127	4,575	4,305	5,127	4,677	5,400	5,176	4,643
General Surgery	17,993	13,092	24,555	22,069	20,287	20,071	19,475	18,262	25,282	27,647	21,325
Thoracic/Cardiovascular Surgery	174,443	n/a	*	89,017	160,659	128,263	86,103	106,719	136,764	90,470	128,515
Urology	63,926	*	50,369	41,775	55,094	56,118	103,217	90,114	85,805	69,446	60,960
Orthopedic Surgery	44,059	29,640	55,858	23,443	33,336	29,076	31,379	30,585	32,645	31,903	31,302
Plastic Surgery	108,797	†	159,458	60,041	103,858	72,080	84,491	74,800	77,839	79,806	81,912
Neurosurgery	*	n/a	1,480,681	852,313	178,711	211,091	*	172,236	2,018,540	133,829	229,472
Ophthalmology	38,289	38,798	19,945	24,692	29,419	28,553	42,230	27,449	34,799	27,055	29,062
Otolaryngology	36,679	*	97,986	48,057	49,206	58,320	89,723	65,761	75,994	71,848	59,675
Obstetrics/Gynecology	24,872	23,814	24,400	24,975	22,038	19,350	22,788	28,499	24,519	34,073	22,456
Total Specialties	1,786	3,058	2,584	1,844	1,399	1,348	1,539	1,977	1,889	1,663	1,504
Total Physicians	767	1,023	921	854	696	672	780	789	751	713	709

Notes:

* Data have been suppressed. Please see the Methodological Notes, Data Suppression section for details.

† Prince Edward Island plastic surgeons are included with general surgeons.

n/a = Not Applicable – There were no physicians for this specialty for this province.

Net population figures are used to calculate these figures.

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 7.2. Full-Time-Equivalent Physicians, Based on Fee-for-Service Billings, per 100,000 Population by Type of Practice, 2005–2006

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	74	65	70	63	72	75	63	76	80	80	75
Medical Specialties	36	15	20	30	50	51	45	29	34	41	45
Internal Medicine	16	9	9	13	20	20	15	13	9	14	17
Neurology	1	*	1	1	3	2	2	2	1	2	2
Psychiatry	5	*	4	3	11	13	10	4	11	11	11
Pediatrics	5	5	2	4	6	6	7	2	5	4	5
Dermatology	1	*	1	1	2	1	1	0	1	1	1
Physical Medicine	n/a	n/a	1	0	1	1	1	0	1	1	1
Anesthesia	7	2	3	7	6	8	9	7	6	8	7
Surgical Specialties	20	18	19	24	22	23	20	21	19	19	22
General Surgery	6	8	4	5	5	5	5	5	4	4	5
Thoracic/Cardiovascular Surgery	1	n/a	*	1	1	1	1	1	1	1	1
Urology	2	*	2	2	2	2	1	1	1	1	2
Orthopedic Surgery	2	3	2	4	3	3	3	3	3	3	3
Plastic Surgery	1	†	1	2	1	1	1	1	1	1	1
Neurosurgery	*	n/a	0	0	1	0	*	1	0	1	0
Ophthalmology	3	3	5	4	3	4	2	4	3	4	3
Otolaryngology	3	*	1	2	2	2	1	2	1	1	2
Obstetrics/Gynecology	4	4	4	4	5	5	4	4	4	3	4
Total Specialties	56	33	39	54	71	74	65	51	53	60	67
Total Physicians	130	98	109	117	144	149	128	127	133	140	141

Notes:

* Data have been suppressed. Please see the Methodological Notes, Data Suppression section for details.

† Prince Edward Island plastic surgeons are included with general surgeons.

n/a = Not Applicable—There were no physicians for this specialty for this province.

Net population figures are used to calculate these figures.

Based on gross payments.

Base year 2000–2001.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 8.1. Population per Physician Who Received at Least \$60,000 in Fee-for-Service Payments by Type of Practice, 2005–2006

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	1,514	2,031	1,346	1,492	1,410	1,504	1,752	1,425	1,176	1,133	1,387
Medical Specialties	3,599	13,812	4,688	3,745	2,263	2,287	2,248	3,695	2,879	2,405	2,465
Internal Medicine	7,797	13,812	10,974	8,934	5,035	5,870	5,927	8,687	11,721	7,342	6,391
Neurology	102,922	n/a	155,472	105,930	47,814	59,536	58,679	70,740	66,735	55,304	58,837
Psychiatry	25,730	*	22,752	41,195	13,772	9,083	10,478	28,296	10,549	8,726	10,873
Pediatrics	36,758	*	54,872	28,520	20,006	21,962	16,300	43,059	20,062	24,334	22,381
Dermatology	85,768	*	71,756	92,689	44,458	79,007	90,275	198,071	93,430	76,044	69,512
Physical Medicine	n/a	n/a	155,472	*	146,200	108,294	117,358	*	136,251	157,720	136,953
Anesthesia	16,082	*	30,091	13,241	14,184	13,759	12,099	12,862	11,848	11,572	13,551
Surgical Specialties	5,848	6,906	4,962	3,882	4,141	4,629	4,973	5,296	5,249	4,478	4,587
General Surgery	22,374	17,265	22,752	20,598	16,709	21,042	20,589	18,006	23,357	24,334	20,305
Thoracic/Cardiovascular Surgery	*	n/a	*	82,390	133,375	121,962	83,827	141,479	142,175	72,177	118,323
Urology	57,179	n/a	49,096	37,076	52,430	60,686	69,034	82,530	77,858	65,514	60,157
Orthopedic Surgery	36,758	*	51,824	22,470	30,410	32,293	31,718	34,150	29,460	25,653	30,798
Plastic Surgery	*	†	155,472	57,039	96,233	79,007	117,358	82,530	72,667	73,421	84,251
Neurosurgery	*	n/a	*	*	168,942	261,709	*	*	133,076	*	257,471
Ophthalmology	34,307	27,624	19,037	28,520	29,931	34,323	39,119	38,091	38,024	26,125	31,771
Otolaryngology	46,783	*	71,756	46,345	43,692	59,536	65,199	76,181	81,751	60,835	57,267
Obstetrics/Gynecology	32,163	19,732	22,210	19,513	20,165	19,814	22,143	30,011	24,044	26,125	21,499
Total Specialties	2,228	4,604	2,410	1,906	1,463	1,530	1,548	2,177	1,859	1,564	1,604
Total Physicians	901	1,409	864	837	718	759	822	861	720	657	744

Notes:

* Data have been suppressed. Please see the Methodological Notes, Data Suppression section for details.

† Prince Edward Island plastic surgeons are included with general surgeons.

n/a = Not Applicable—There were no physicians for this specialty for this province.

Net population figures are used to calculate these figures.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Table 8.2. Physicians Who Received at Least \$60,000 in Fee-for-Service Payments per 100,000 Population by Type of Practice, 2005–2006

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	66	49	74	67	71	66	57	70	85	88	72
Medical Specialties	28	7	21	27	44	44	44	27	35	42	41
Internal Medicine	13	7	9	11	20	17	17	12	9	14	16
Neurology	1	n/a	1	1	2	2	2	1	1	2	2
Psychiatry	4	*	4	2	7	11	10	4	9	11	9
Pediatrics	3	*	2	4	5	5	6	2	5	4	4
Dermatology	1	*	1	1	2	1	1	1	1	1	1
Physical Medicine	n/a	n/a	1	*	1	1	1	*	1	1	1
Anesthesia	6	*	3	8	7	7	8	8	8	9	7
Surgical Specialties	17	14	20	26	24	22	20	19	19	22	22
General Surgery	4	6	4	5	6	5	5	6	4	4	5
Thoracic/Cardiovascular Surgery	*	n/a	*	1	1	1	1	1	1	1	1
Urology	2	n/a	2	3	2	2	1	1	1	2	2
Orthopedic Surgery	3	*	2	4	3	3	3	3	3	4	3
Plastic Surgery	*	†	1	2	1	1	1	1	1	1	1
Neurosurgery	*	n/a	*	*	1	0	*	*	*	1	0
Ophthalmology	3	4	5	4	3	3	3	3	3	4	3
Otolaryngology	2	*	1	2	2	2	2	1	1	2	2
Obstetrics/Gynecology	3	5	5	5	5	5	5	3	4	4	5
Total Specialties	45	22	41	52	68	65	65	46	54	64	62
Total Physicians	111	71	116	119	139	132	122	116	139	152	134

Notes:

* Data have been suppressed. Please see the Methodological Notes, Data Suppression section for details.

† Prince Edward Island plastic surgeons are included with general surgeons.

n/a = Not Applicable—There were no physicians for this specialty for this province.

Net population figures are used to calculate these figures.

Alternative forms of reimbursement, such as salary and sessional, are not included.

Details on specialty groupings can be found in the Data Definitions: Specialty portion of this report.

Source: NPDB, CIHI.

Appendix A

Measurement of a Full-Time-Equivalent Physician

Measurement of a Full-Time-Equivalent Physician

Historical Measures

In Canada, physician supply has historically been measured in terms of the number of physicians available. These data are often extended to physician/population ratios for comparisons or analyses of changes over time. Traditionally, these statistics have been used in planning exercises and for the assessment of policy decisions. In particular, they have been used for the following purposes:

- To assess the factors contributing to the increases in medical care costs;
- To provide input to physician manpower requirement studies; and
- To assess trends in physicians' remuneration.

The number of fee-for-service physicians has always been viewed as an important health economic indicator because of the "gatekeeper" role that physicians play in the health care delivery system.

The use of simple counts of physicians for analysis implies that all physicians are equal in terms of their capacity to provide patient care. This is clearly not plausible; some physicians are semi-retired, some work part-time and many are not in active clinical practice. Even considering only fee-for-service physicians, the availability of medical services will vary considerably as a result of trade-offs individual physicians have made between income and leisure time. To try to produce a more meaningful measurement of physician supply, the practice of counting full-time and full-time-equivalent physicians was adopted.

It should be noted that the term "income" used in this report refers to physician's gross payments for fee-for-service claims only. These payments do not include payment sources such as salary or sessional payments.

The first and simplest methods of defining full-time physicians involved the use of income thresholds. A dollar amount was specified and any practitioner whose income met or exceeded this amount was counted as one full-time physician. Physicians whose total billing was less than this amount were excluded from the count. The resulting estimates of physician supply depended strongly on what threshold was chosen. Furthermore, the supply of medical services by part-time physicians was ignored in the count. Depending on the choice of threshold, statistics could be generated with this algorithm that indicated anything from a serious lack of physician resources to a complete oversupply of all practitioner specialties. An improvement of this early method involved the counting of part-time physicians as a fraction of a full-time physician.

Apart from the problems caused by the arbitrary choice of income threshold, there are other limitations to this methodology. The statistics are not suitable for any time series analysis, as the sub-set of physicians' earning in excess of any fixed dollar benchmark will be affected over time by increases in provincial and territorial fee schedules. In addition, comparability will be weak because of differing benefit levels among the provinces and territories.

To try to improve jurisdictional, inter-specialty and time series comparisons, thresholds were redefined in terms of percentile levels of physician earnings. For example, instead of counting all physicians receiving payments in excess of \$30,000 as full-time, all practitioners billing within the top 70% of physicians could be considered full-time. Percentile thresholds have clear advantages over the dollar values. The impact of benefit schedule increases are automatically adjusted. Jurisdictional comparability is improved, but still there is no indication that the full-time benchmark in one province or territory would reflect the same intensity of production as the full-time benchmark in any other jurisdiction. Additionally, percentile thresholds implicitly adjust for changes over time, changes in the service price and changes in service utilization/volume per physician. Full-time-equivalent methods based on the average or median earnings are variations on this methodology.

Development of an Improved Measure of Full-Time Equivalence

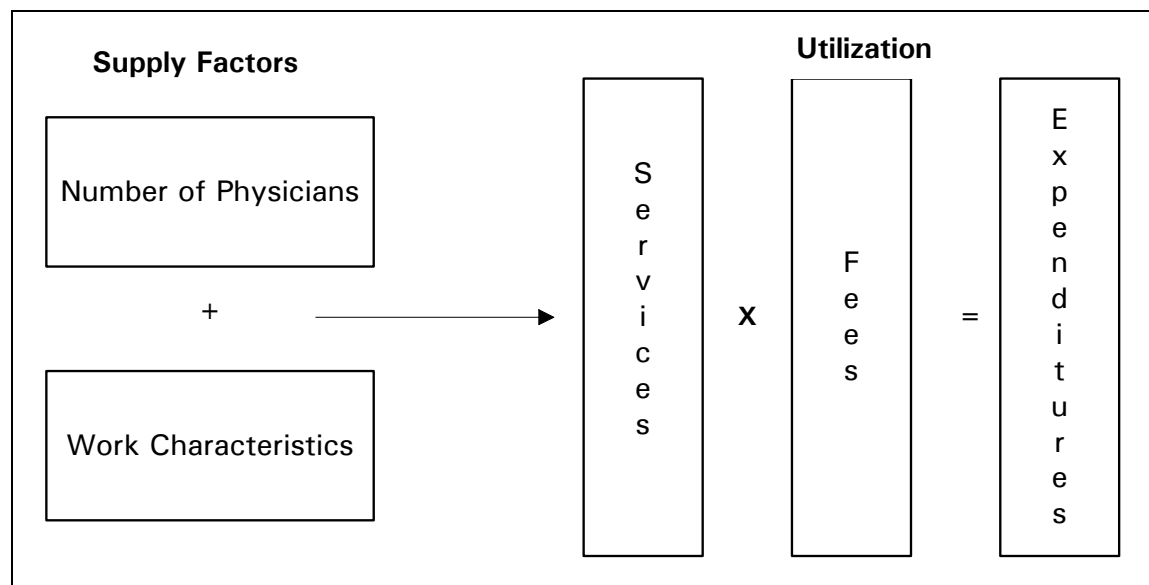
The development of a new measure for FTE was undertaken in 1984 by a working group comprising representatives from National Health and Welfare, provincial medicare agencies and academic consultants. The working group identified the following objectives of an FTE measure:

- Provide a consistent basis for physician supply comparisons within and across provinces and territories;
- Provide a consistent basis for measuring changes through time in physician supply; and
- Recognize workload differences among individual specialties.

Conceptual Model

All measures of full-time equivalence are to some degree arbitrary, in the sense that there is no “best” measure to be derived through statistical techniques. The choice of a measure was therefore determined by the objectives and by data availability. The measure developed by the working group was based on the following conceptual model.

Figure A1. Relationship Between Income and FTE Values



In an economic context, physicians and hours of work are seen as measures of supply. Services produced by physicians are the most basic measure of utilization, while expenditure is the product of services and fees. The relationship between these three variables is illustrated in Figure A1. The realistic choices for estimation of full-time equivalence were (1) hours of work, (2) services provided and (3) payments.

An internal study indicated a high degree of variability in income per hour worked by fee-for-service physicians, after standardizing for specialty. Consequently, an FTE measure based on hours of work would not provide accurate estimates of the *potential output* (in terms of clinical services) of the physician population. As FTE measures are used most often in a context where output or expenditure is an important consideration, it was decided that a measure of output would be preferable to hours of work, which is essentially an input measure.

Although services are measures of output, they are not weighted for intensity or value. Expenditure measures services weighted by fees. Payments to physicians were therefore chosen as the most appropriate measure of output with which to determine full-time equivalence.

Rationale

In the model adopted, gross income per physician is used to measure output or workload. As there is a wide range of output among physicians within the same specialty, a single cut-off to measure full-time equivalence status did not seem appropriate. It was therefore decided to use a range of output that would be realistic for a typical full-time physician.

It was essential that this range could be defined statistically and, after some experimentation, the 40th and 60th percentiles of nationally adjusted payments were chosen as the benchmarks within which to measure full-time equivalence.

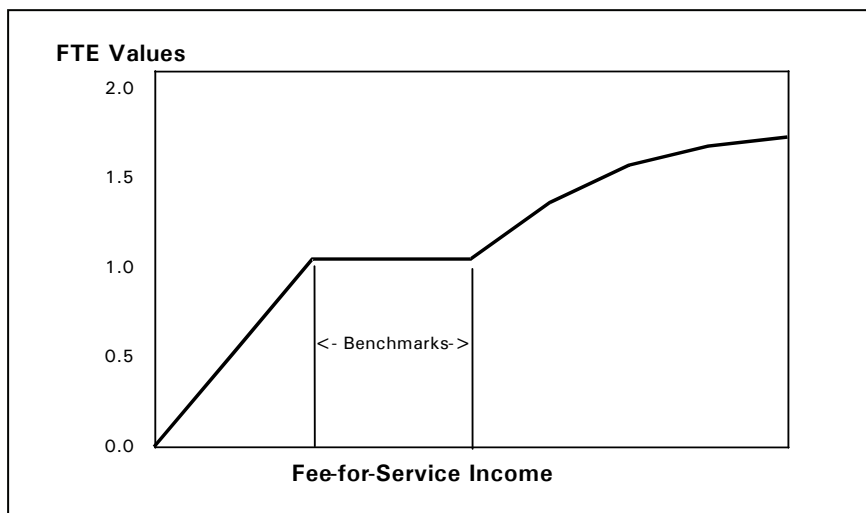
Simulations of alternative percentiles indicated that the FTE counts were relatively insensitive to different benchmark ranges, as long as those ranges were symmetric (for example, the 30th to 70th percentiles yielded approximately the same total counts as the 40th to 60th percentiles).

Comprehensiveness

CIHI's current FTE methodology is designed to provide a weighted count of all physicians providing fee-for-service care under the Canadian medicare system. Physicians with payments less than the lower benchmark are counted as fractions of a FTE; physicians within or equal to the benchmarks are counted as one; and physicians above the benchmark are counted as more than one FTE. The decision to count physicians above the benchmark as more than one FTE was based on a recognition that many physicians have large workloads and the FTE measure should reflect this.

At the same time, an algorithm incorporating logarithms was used to prevent high-income physicians from having a very large FTE (for example, a physician whose income is three times the upper benchmark will have a FTE of 2.1, while a physician whose income is four times the upper benchmark will have a FTE of 2.4). The relationship between income and FTE count is illustrated in Figure A2.

Figure A2. Relationship Between Income and FTE Values



Consistency

In order to provide consistency across provinces and through time, it was necessary to remove the effects of different fee levels on physician income. The methodology adopted allowed payments to each physician to be standardized for interprovincial fee differences in order to compute national benchmarks for a base year. The national benchmarks were then converted to provincial values. Each year, the provincial benchmarks are indexed by specialty-specific fee increases or decreases.

Benchmark values and FTE physician counts vary depending on the base year used for analysis. Physician reports for data years 1989–1990 to 1995–1996 were based on FTE benchmarks that were set using a 1985–1986 base year. Physician reports for data years 1996–1997 to 2001–2002 were based on FTE benchmarks established using 1995–1996 NPDB data. In 2004, CIHI carried out a thorough review of current FTE methodologies as part of an NPDB system re-engineering effort. The review focused on the application of payment source selection criteria at various stages of FTE data processing. Starting with the 2002–2003 data year, FTE physician reports were produced using a 2000–2001 base year. For a detailed discussion of base year changes and the potential impact on FTE results, please see *Full-Time Equivalent Physicians Report, Canada, 2002–2003*, Appendix A (CIHI: Ottawa, 2004).

Appendix B

Impact of Excluding Ontario's Payments for J, X and Y Fee Codes With Suffix B

Impact of Excluding Ontario's Payments for J, X and Y Fee Codes With Suffix B

In 2001, 94% of physicians' payment claims for Ontario's J, X and Y fee codes, with suffix B, were paid directly to independent health facilities or hospital departments. While claims for these fee codes include an associated physician identifier, payments for the claims are not typically paid directly to physicians.

Starting with the 2001–2002 data year, the methodology used to calculate full-time-equivalent physician count results in Ontario was updated to exclude payments related to fee codes J, X and Y, with suffix B. In 2005–2006, these fee codes accounted for approximately \$125.8 million (2.6%) of Ontario's publishable total fee-for-service payments. Given that FTE calculations are based on physician payments, this payment exclusion has a corresponding impact on FTE physician count results. Tables B1 and B2 summarize the impact of excluding these payments on FTE physician count and average gross fee-for-service payment results for the years 2005 and 2006.

Table B1. Percent Reduction in FTE Physician Count Results Due to Exclusion of Payments for Ontario Fee Codes J, X and Y (With Suffix B), by Specialty, 2005–2006

	2005–2006	
	Ont.	Total
Family Medicine	0.31%	0.12%
Medical Specialties	1.98%	0.88%
Internal Medicine	4.23%	1.90%
Neurology	1.46%	0.55%
Psychiatry	0.77%	0.36%
Pediatrics	0.69%	0.30%
Dermatology	0.00%	0.00%
Physical Medicine	0.16%	0.08%
Anesthesia	0.03%	0.01%
Surgical Specialties	1.44%	0.60%
General Surgery	1.60%	0.67%
Thoracic/Cardiovascular Surgery	2.84%	1.11%
Urology	0.54%	0.23%
Orthopedic Surgery	0.00%	0.00%
Plastic Surgery	0.00%	0.00%
Neurosurgery	1.56%	0.65%
Ophthalmology	1.02%	0.40%
Otolaryngology	1.43%	0.57%
Obstetrics/Gynecology	2.98%	1.35%
Total Specialties	1.81%	0.79%
Total Physicians	1.06%	0.44%

Source: NPDB, CIHI.

Table B2. Percent Reduction in Average Gross Fee-for-Service Payment-per-Physician Results Due to Exclusion of Payments for Ontario Fee Codes J, X and Y (With Suffix B), by Specialty, 2005–2006

	Ontario		Total	
	Physicians Who Received Payments ≥ \$60,000	Average Gross Fee-for-Service Payment per FTE Physician	Physicians Who Received Payments ≥ \$60,000	Average Gross Fee-for-Service Payment per FTE Physician
Family Medicine	0.71%	0.40%	0.28%	0.16%
Medical Specialties	5.03%	3.10%	2.43%	1.54%
Internal Medicine	8.60%	4.52%	4.41%	2.52%
Neurology	4.22%	2.64%	1.73%	1.13%
Psychiatry	3.05%	2.14%	1.51%	1.05%
Pediatrics	0.53%	0.22%	0.26%	0.11%
Dermatology	0.00%	0.00%	0.00%	0.00%
Physical Medicine	0.13%	-0.04%	0.07%	-0.01%
Anesthesia	0.05%	0.02%	0.02%	0.01%
Surgical Specialties	2.38%	1.01%	1.02%	0.44%
General Surgery	2.97%	1.30%	1.26%	0.58%
Thoracic/Cardiovascular Surgery	5.21%	2.25%	2.14%	0.98%
Urology	0.90%	0.35%	0.38%	0.15%
Orthopedic Surgery	0.01%	0.00%	0.00%	0.00%
Plastic Surgery	0.00%	0.00%	0.00%	0.00%
Neurosurgery	2.12%	0.52%	1.10%	0.37%
Ophthalmology	1.58%	0.55%	0.60%	0.19%
Otolaryngology	2.75%	1.27%	1.11%	0.53%
Obstetrics/Gynecology	4.28%	1.65%	2.06%	0.86%
Total Specialties	3.98%	2.24%	1.83%	1.06%
Total Physicians	2.63%	1.60%	1.13%	0.69%

Source: NPDB, CIHI.

Appendix C

Net Population Estimates

Table C. Statistics Canada Net Population Estimates (in Thousands), 2005–2006

Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
2004-2005 (PR)	516.0	137.6	928.7	746.4	7,549.7	12,424.3	1,168.5	992.5	3,203.6	4,201.7	31,869.0
2005-2006 (PR)	514.6	138.1	932.8	741.5	7,602.4	12,562.0	1,173.6	990.4	3,270.0	4,258.4	32,183.9

Notes:

PR=Updated postcensal estimates.

Net population estimates are produced by excluding from total estimates the members of the Royal Canadian Mounted Police, the Canadian Armed Forces personnel and the number of inmates in federal and provincial institutions.

The estimates are based on 2001 census counts, adjusted for net census undercoverage.

These figures have been rounded independently to the nearest hundred.

Source: Net population estimates, Statistics Canada.

Appendix D

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NPDB Authorization Officers

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Appendix E

NPDB Specialty Categories

NPDB Specialty Categories

- 01 ***Family Medicine***
 - 010 Residency
 - 011 General practice
 - 012 Family practice
 - 013 Community medicine/public health
 - 014 Emergency medicine

Medical Specialties

- 02 ***Internal Medicine***
 - 020 General internal medicine
 - 021 Cardiology
 - 022 Gastroenterology
 - 023 Respiratory medicine
 - 024 Endocrinology
 - 025 Nephrology
 - 026 Hematology
 - 027 Rheumatology
 - 028 Clinical immunology and allergy
 - 030 Oncology
 - 031 Geriatrics
 - 032 Tropical medicine
 - 035 Genetics
- 04 ***Neurology***
 - 040 Neurology and EEG
 - 041 Neurology
 - 042 EEG
- 05 ***Psychiatry***
 - 050 Psychiatry and neuropsychiatry
 - 051 Psychiatry
 - 052 Neuropsychiatry
- 06 ***Pediatrics***
 - 060 Pediatrics
- 07 ***Dermatology***
 - 065 Dermatology
- 08 ***Physical Medicine/Rehabilitation***
 - 070 Physical medicine and rehabilitation
 - 071 Electromyography
- 09 ***Anesthesia***
 - 075 Anesthesia

Surgical Specialties

- 10 **General Surgery**
080 General surgery

- 11 **Thoracic/Cardiovascular Surgery**
086 Thoracic surgery
087 Cardiovascular surgery
088 Cardiovascular/thoracic surgery

- 12 **Urology**
090 Urology

- 13 **Orthopedic Surgery**
095 Orthopedic surgery

- 14 **Plastic Surgery**
100 Plastic surgery

- 15 **Neurosurgery**
110 Neurosurgery

- 16 **Ophthalmology**
115 Ophthalmology
116 Ophthalmology/otolaryngology

- 17 **Otolaryngology**
120 Otolaryngology

- 18 **Obstetrics/Gynecology**
126 Obstetrics
127 Gynecology
128 Obstetrics/gynecology

Note: Although genetics is no longer a sub-specialty of internal medicine, it is included in the internal medicine category because the number of physician records assigned to this specialty is relatively small.

Appendix F

Fee-for-Service Radiology and Laboratory Coverage in the NPDB

Fee-for-Service Radiology and Laboratory Coverage in the NPDB

Radiology and laboratory services supplied to CIHI for use in the NPDB are not uniform or complete. For this reason the data are not routinely used in the NPDB publications. The following notes were provided by the provincial medical insurance plans regarding the radiology and laboratory services included on the NPDB file submissions.

Newfoundland and Labrador

- No laboratory services data are supplied to the NPDB, as these services are paid through the hospital funding.
- Physicians can be paid on a fee-for-service basis for interpretation services on certain diagnostic services such as EEG, ECGs, etc. These services would be included in the NPDB file submissions.

Prince Edward Island

- No laboratory services data are supplied to the NPDB, as these services are paid through the hospital funding.
- Radiologists' interpretation fees are included in the NPDB file submissions.

Nova Scotia

- No laboratory services data are supplied to the NPDB, as these services are paid through the hospital funding.
- The majority of radiology billings are not included in NPDB file submissions. For Nova Scotia, the majority of radiology billings are not included in fee-for-service earnings.

New Brunswick

- No laboratory services data are supplied to the NPDB, as these services are paid through the hospital funding.
- All radiology services are excluded in the NPDB file submissions.

Quebec

- No laboratory services are included.
- Radiology services provided by physicians in private practice are included in the NPDB file submissions.

Ontario

- Approximately 50% of all laboratory services are funded through OHIP and therefore are included in the NPDB file submissions. The remaining 50% are funded via public health (1%) and hospital global budgets (49%).
- Information on radiology services is not available.

Manitoba

- Laboratory services provided in the NPDB file submissions are those provided by privately owned fee-for-service laboratories. Laboratory services provided in urban/rural facilities are not included in the NPDB file submissions.
- Radiology services submitted include all private radiology services and all urban facility radiology services. Rural facility radiology services, approximately 11% of the total dollar value for radiology services, are not included in NPDB file submissions.

Saskatchewan

- Since 1993–1994, the only laboratory services included in the NPDB file submissions are common in-office laboratory services provided by physicians other than pathologists. Responsibility for private laboratory services provided by specialists in pathology was transferred to health regions in October 1993 and is no longer funded on a fee-for-service basis.
- Facility-based radiology services, which are funded through health regions, are excluded from the NPDB file submissions, as well as radiology services provided through the Screening Program for Breast Cancer.

Alberta

- Up to July 1, 1995, only non-hospital based laboratory services were included.
- Only non-facility based radiology services are included in NPDB file submissions.

British Columbia

- Laboratory and radiology services, when performed on a fee-for-service outpatient basis, are included in NPDB file submissions, but inpatient services are not included.