



The Conference Board
of Canada

Physicians' Offices in Canada: Assessing Their Economic Footprint

Prepared for:
Canadian Medical Association
1867 Alta Vista Dr.
Ottawa ON K1G 5W8

The Conference Board of Canada
Economic Forecasting and Analysis Division
Contact: Matthew Stewart
Director
Tel. 613-526-3280 ext. 439
stewartm@conferenceboard.ca

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Executive Summary

At a Glance

- Not only do physicians' offices play a crucial role in the delivery of health services to Canadians they are also an important contributor to Canada's economy.
- Direct GDP in physicians' offices was \$22.3 billion in 2016.
- Physicians' offices directly employed 137,000 people in 2016.
- The total economic footprint of physicians' offices in 2016, including direct, indirect, and induced impacts, was \$33.4 billion in GDP.

Canada's health system is one of the defining features of the country in the eyes of Canadians. In surveys, Canadians frequently cite it as one of the things that make them most proud of their country. One of the key pillars of this health system are physicians' offices, which provide a variety of family and specialist health services to Canadians in their communities. According to data from the Canadian Institute for Health Information and Statistics Canada, there are a total of 83,159 physicians practising in Canada in 2017, and they operate a total of 41,113 physicians' offices.

Physicians are not just a cost component of the health care system. Physicians' offices are an important component of the Canadian economy, employing people and supporting suppliers in their communities. This research estimates this economic footprint, providing the amount of money spent by physicians' offices on goods and services, the number of people they employ, and also the indirect supply chain and induced economic activity they support.

The direct gross domestic product produced by physicians' offices in Canada in 2016 was \$22.3 billion. They paid \$6.2 billion in wages and salaries, employed 137,000 people, and contributed \$643 million in tax revenues back to governments. Including the supply chain and induced effects of this economic activity, the total GDP supported by physicians' offices economic footprint is \$33.4 billion, and the total number of jobs supported is 250,000. In terms of economic activity, physicians' offices are similar in size to the architectural, engineering, and related services industry. In terms of employment, physicians' offices are similar in size to the accounting, tax preparation, bookkeeping and payroll services industry or the utilities industry.

The results of this research show that physicians' offices, in addition to providing important health care services to Canadians, also provide a noticeable contribution to Canada's economy. The total economic footprint of physicians' offices—directly, through their supply chain, and through induced effects—accounted for 1.6 per cent of total GDP in Canada in 2016. Particularly in a globalized world where many sources of economic activity can leave for other countries, the economic importance of a sector like physicians' offices—intimately linked with their local communities—should not be understated.

Chapter 1: Assessing the Economic Footprint of Physicians' Offices in Canada

Section 1: Introduction

One of the defining features of Canada, in the eyes of Canadians, is the country's health care system. Statistics Canada's General Social Survey collected information about Canadian identity in 2013; 64 per cent of Canadians reported being proud of Canada's health care system, making it one of the most-valued symbols, along with Canadian history, the Canadian Forces, and the Canadian Constitution. A 2015 poll found that 88 per cent of Canadians felt medicare had a positive impact on their sense of Canadian identity. That makes the health care system the second-most valued feature of Canadian identity, behind only "freedom" and ahead of the Charter of Rights and Freedoms, "tolerance," and the maple leaf.¹

Although the health care system is publicly funded in Canada, service provision is predominantly private. Physicians' offices are the front lines of this health care system. For most Canadians, the point of access for regular services is their family doctors. Many specialists are also accessed through physicians' offices. According to the 2014 National Physician Survey, 64 per cent of physicians practise out of a doctor's office (as opposed to a research or teaching facility, hospital, long-term care facility, or lab).²

Although the economics of the health care system are almost always thought of in terms of the system's costs to governments and taxpayers, the health care system today is also a significant contributor to Canada's economy. And, as major components of the health care system, physicians' offices are in turn significant contributors to local economies across the country. This research quantifies the economic footprint of physicians' offices in Canada: the economic activity they generate, the goods and services they purchase from suppliers, the jobs they support, and the taxes they pay.

Section 2 of this report provides some general information about the Canadian health care system and the place of physicians' offices within it. Section 3 describes how we estimate the economic footprint using data from Statistics Canada and The Conference Board of Canada's models of the Canadian economy. Section 4 presents the results of the economic footprint analysis. Section 5 estimates the net incomes of physicians after accounting for office overhead.

Definitions

Gross domestic product (GDP): GDP is used to measure production in a region during a specific period. Although there are various ways to calculate GDP, the concept of value added is probably the most intuitive method.

Value added: Value added (or net output) is established for each industry by calculating the difference between total revenue and the sum of expenses on intermediate parts, materials, and services used in

¹ EKOS Politics, *Canadians Worried Sick About Health Care*.

² College of Family Physicians of Canada, Canadian Medical Association, and Royal College of Physicians and Surgeons of Canada, 2014 National Physician Survey.

the production process. Summing the value added for all of a region's industries will yield the GDP in that region.

Economic footprint (or economic impact): This is defined as a sector or an industry's overall contribution to national economic activity. It includes the direct, indirect, and induced impacts described below.

Direct impact: Direct impact measures the value added to the economy that is directly attributable to the sector's employees, the wages earned, and the revenue the firms generate.

Indirect impact (or supply chain impact): Indirect impact measures the value-added that the direct impact firms generate within the economy through their demand for intermediate inputs or other support services. These purchases of goods and services from suppliers make up the supply chain.

Induced impact: Induced impact results when the aforementioned employees and firm owners spend their earnings and profits. These purchases at other businesses in the wider economy lead to more employment, higher wages, and increased income and tax revenues.

Economic multiplier: A sector's economic multiplier corresponds to the ratio between the sector's overall impact on the economy and the economic activity it generates.

Section 2: Physicians' Offices in Context

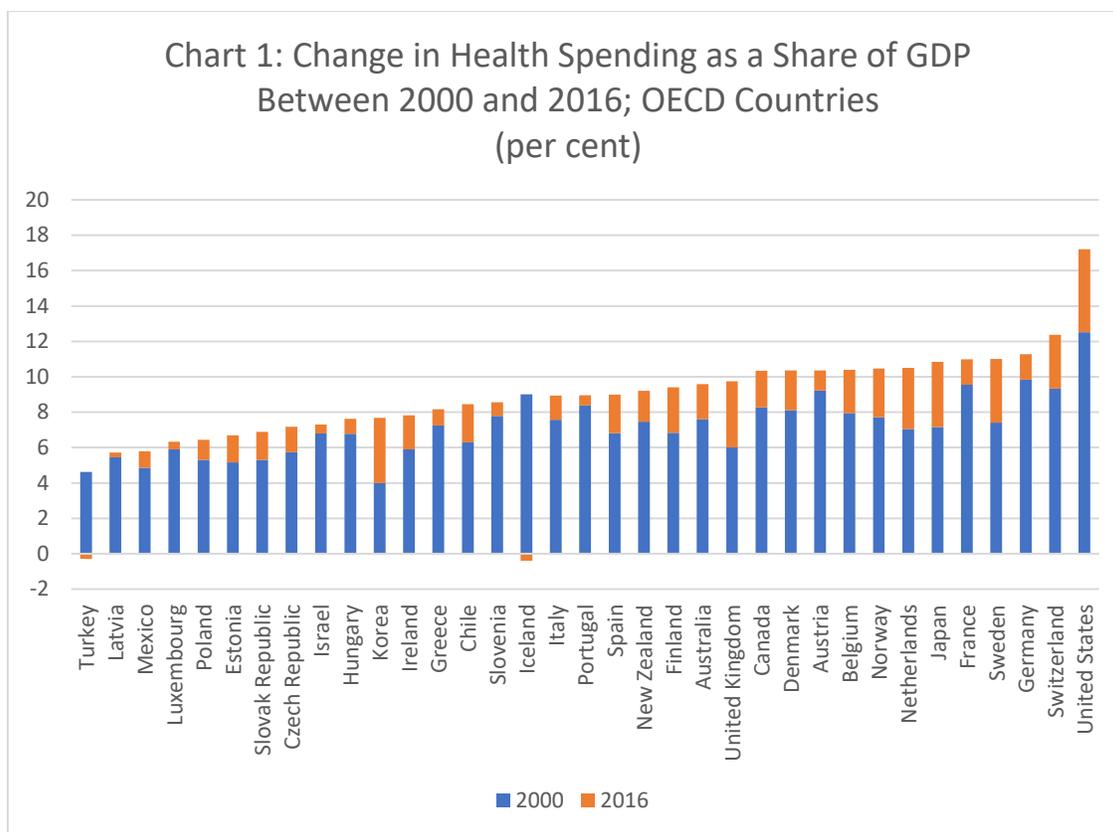
Canada's health care system is the most significant government program, in terms of dollars spent, in the country; in most provinces, health care represents around 40 per cent of program spending. The Canadian Institute for Health Information (CIHI) estimates total health spending in 2016 was \$228 billion, or \$6,299 per Canadian.³

Compared to similar countries, Canada spends more than average on health care. According to the Organisation for Economic Co-operation and Development, Canada spent a total of 10.3 per cent of GDP on health care in 2016; the OECD average was 9.0 per cent of GDP. Canada ranks 12th out of the 35 OECD countries in health spending as a share of GDP. (See Chart 1.) The OECD also estimates that Canada spent 1.7 per cent of GDP on physicians' offices in particular, ranking fifth in the OECD.⁴ In terms of the public-private split in spending, Canada is almost exactly at the OECD average: 70 per cent of health spending is public in Canada versus the OECD average of 73 per cent.⁵ The remaining 30 per cent is paid for by Canadians out of pocket or through private medical insurance.

³ Canadian Institute for Health Information, *National Health Expenditure Trends, 1975 to 2016*.

⁴ OECD Stat, Health Expenditure and Financing.

⁵ Canadian Institute for Health Information, *National Health Expenditure Trends, 1975 to 2016*.



Health care has always been a significant program, but health care spending has ebbed and flowed over the years. Between 2000 and 2016, the average OECD country saw health spending increase by 1.8 percentage points of GDP. Canada's health spending increased by slightly more than this average—by 2.1 percentage points (from 8.3 per cent to 10.3 per cent). After accounting for inflation and population growth, health spending in Canada has been flat since 2010. That contrasts with the 1996–2009 period, when average real per capita spending increased by an average of 3.3 per cent per year. Based on demographics and inflation alone, and with no improvements in care quality, the Conference Board of Canada estimates that health care spending will increase by an average of 5.2 per cent per year through 2035.

Since 2010, health care spending has again grown only slightly faster than inflation and population growth. In real per capita terms, growth has averaged -0.1 per cent per year.⁶ That means essentially no quality improvements, something that's difficult at a time when an aging population means patients' needs are becoming more complex. The current spending restraint in health care is similar in character to the years of restraint the country also experienced during the 1990s, when real per capita spending declined by 0.5 per cent between 1991 and 1996. That period was defined by marked fiscal restraint by governments at both the federal and provincial levels, and contrasts with periods before and after of real per capita spending growth of around 3 per cent per year.

Although Canadians often speak about their public health care system, what makes it public is its funding: most health services are actually provided through privately owned facilities, including

⁶ Canadian Institute for Health Information, CIHI National Health Expenditures Database.

hospitals, labs, and long-term care homes. Government-funded health insurance plans then reimburse private providers for the care services they provide to Canadians. Canada's system is one of a variety of systems for providing public health care. In others, such as in the Nordic countries and the United Kingdom, the delivery of health care services is also undertaken directly by government. In some countries, private health insurers play a large role; in others, they do not. And in some, a separate private health system exists alongside the publicly funded one.

Within the Canadian health care system, the largest sources of spending are hospitals, which consumed about 30 per cent of expenditures in 2014 (the most recent year for which data are available), drugs, which consumed about 16 per cent of expenditures, and physicians, which consumed about 15 per cent of expenditures.⁷

Physicians' offices are one of the types of private entities delivering health care services to Canadians. These offices may be solo practices, where the physician in question practises alone (with the help of support staff). Or they may be larger offices, in which there are a number of physicians partnering together.⁸ According to the 2014 National Physician Survey, 64 per cent of physicians practise out of a doctor's office of some sort (as opposed to a research or teaching facility, hospital, long-term care facility, or lab).⁹

Although real health care spending per capita has been flat, that has not been the case for physician numbers. Between 2011 and 2015, growth in the number of physicians was three times higher than population growth.¹⁰ In January 2017 there were a total of 83,159 practising physicians in Canada, or 2.28 per 1,000 people. That is a significant increase from the 1.51 physicians per 1,000 people in 1980 and the 1.93 physicians in 2007. Nonetheless, Canada still has 0.8 fewer physicians per 1,000 people than the OECD average.¹¹ The number of physicians per capita varies substantially between provinces. In 2015, rates ranged from a low of 1.81 physicians per 1,000 people in Prince Edward Island to a high of 2.61 in Nova Scotia.

According to data from the Business Register, there were 41,113 physician's offices in Canada as of June 2017. The offices are predominantly small: 17 out of every 20 (84 per cent) physicians' offices have between one and four employees. Of the more than 40,000 physicians' offices, fewer than 2,000 have 10 or more employees.¹² (See Table 1.)

Employees	Total employees	1 to 4	5 to 9	10 to 19	20+
Physicians' offices	41,113	84%	11%	3%	2%
Hospitals	1,176	21%	6%	4%	69%
Nursing and residential care facilities	10,670	15%	20%	27%	38%

⁷ Canadian Institute for Health Information, CIHI National Health Expenditures Database.

⁸ Canadian Institute for Health Information, *Canada's Health Care Providers*.

⁹ College of Family Physicians of Canada, Canadian Medical Association, and Royal College of Physicians and Surgeons of Canada, 2014 National Physician Survey.

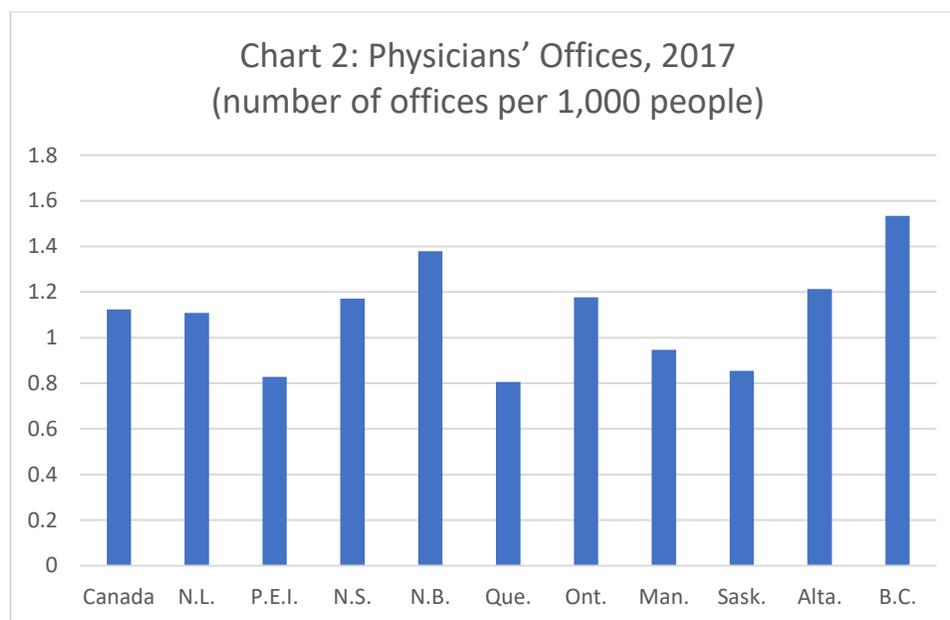
¹⁰ Canadian Institute for Health Information, *Physicians in Canada, 2015*.

¹¹ OECD Stat, Health Care Resources.

¹² Statistics Canada, Business Register.

Dentists' offices	14,703	36%	37%	22%	5%
Other health practitioners' offices	16,670	69%	19%	8%	3%

Physicians' offices are spread across the country roughly in proportion to the provinces' populations. Nationally, there are about 1.12 physicians' offices per 1,000 people. In the provinces, this ranges from a low of 0.81 offices per 1,000 people in Quebec to a high of 1.53 offices in British Columbia. (See Chart 2.)



In addition to the physicians themselves, physicians' offices employ many other people. In 2016, 137,000 people worked in physicians' offices in Canada.¹³ Combining the employment data with the Business Register data, we can calculate that each physician's office employs an average of 3.3 employees. Using the total number of physicians and the share of physicians working in physicians' offices, we can calculate that roughly 53,200 of the total employment were physicians themselves. The remaining 83,300 were non-physicians, suggesting that there are an average of about 1.6 support staff in physicians' offices for each physician.

The way physicians' offices are structured can vary substantially. According to a 2006 survey of physicians in seven countries, 24 per cent of physicians in Canada reported being in solo practice, while 17 per cent reporting being in a group of 10 doctors or more. Based on a survey of 25,000 physicians in 2015 and 2016 by the CMA, 60 per cent of physicians are incorporated nationally.¹⁴ They reported employing an average of 2 full-time employees in the professional corporation (including themselves),

¹³ Conference Board of Canada calculations based on Statistics Canada IO model and CANSIM table 281-0023, using NAICS 6211.

¹⁴

or 3 employees including part-time employees. Overhead expenses were an average of 29 per cent of gross professional income.¹⁵

As mentioned earlier, physician services accounted for 15 per cent of health spending in 2014 (most recent year of available data).¹⁶ This is a recovery from its low point in 2005, and comparable to levels in the 1980s.¹⁷ Because only about two-thirds of physicians are practising in a physician's office, the relationship between the public health care spending going to physicians and the health care spending going to physicians' offices is not exact. We calculate actual spending in physicians' offices in 2016 to be \$30.6 billion, although this figure also includes out-of-pocket spending by patients and spending by private insurance.

Spending in physicians' offices goes toward a number of different categories. Offices must be rented or purchased and must be filled with the medical equipment necessary to provide service to patients. In most cases, administrative staff must be hired to help the office run. Other costs include professional fees, utilities, drugs, furniture, and so on. Once these overhead costs are taken care of, the remaining funding goes to physicians' earnings.

Section 3: Methodology

This report quantifies the economic footprint of physicians' offices in Canada. Calculating an economic footprint involves estimating the full impact an industry has on the entire economy by using economic models to help us understand how changes in the activity of one industry can have wider repercussions.

The most apparent impact is the economic activity directly attributed to an industry (direct impact), which comes largely in the form of wages of those directly employed in the sector and profits generated by the sector. In addition, a sector's normal operations will generate demand for inputs from other industries (indirect or supply chain impact), while some of the income and profits generated by all these activities will be spent again elsewhere in the economy (induced impacts).

The first step in any footprint analysis is obtaining total spending in the sector. The Statistics Canada reports that GDP at basic prices in 2016 for offices of physicians was \$21.9 billion (in 2016 dollars).¹⁸ This figure ("at basic prices") includes wages and salaries and corporate profits for the sector, but not taxes and margins. Total spending in the sector includes these two additional components, as well as purchases of goods and services from suppliers as well as non-value-added spending that is lost to import leakages. Based on Statistics Canada's input-output multipliers for 2013 (the latest year of available data), we estimate that total spending in the sector is \$30.6 billion (2016 dollars).

Once we have the raw spending total for physicians' offices, we then use Statistics Canada's input-output model to calculate the economic impact of this spending, not just in physicians' offices themselves but as their spending ripples through suppliers, employees, and the wider economy. While input-output model results provide a detailed account of the flow of spending through the sectors of an

¹⁵ Canadian Medical Association, *CMA Brief: Small Business Perspectives of Physician Medical Practices in Canada*.

¹⁶ Canadian Institute for Health Information, *National Health Expenditure Trends, 1975 to 2016*.

¹⁷ Ibid.

¹⁸ Statistics Canada, CANSIM table 379-0030, using North American Industry Classification System (NAICS) code 6211, "Offices of physicians."

economy, the results cover only a limited range of impacts. We therefore use The Conference Board of Canada's macroeconomic model of the Canadian economy to generate additional impact estimates not available through the input-output model.

Section 4: Economic Footprint

In this section, we discuss the results obtained from the economic modelling. The three categories of impact are discussed, followed by a discussion of how labour income is distributed in the sector.

Direct Impact

Physicians' offices directly contributed \$22.3 billion to Canada's GDP in 2016. This direct contribution measures the total (value-added) dollar value of the money spent by physicians' offices on wages, salaries, and corporate profits. The model estimates the direct employment impact at 137,000 jobs. (See Table 2.)

GDP at market prices (\$ millions)	22,338
Final domestic expenditure (\$ millions)	23,937
Less imports (\$ millions)	-1,598
Labour and corporate income (\$ millions)	21,696
Employment	136,542

These results mean that the direct economic size of physicians' offices is comparable to other industries like the architectural, engineering, and related services industry, which has an almost identical direct GDP contribution. In terms of employment, physicians' offices are similar in size to the accounting, tax preparation, bookkeeping and payroll services industry or the utilities industry.

Supply Chain Impact

The direct economic impact of physicians' office is far from the full economic impact of the industry, though. This economic activity by physicians' offices supports a plethora of other businesses in the economy. Without physicians' offices spending on goods and services, local producers and distributors would have less business. They would in turn need to employ fewer people in building and distributing medical equipment, providing professional services, and so on. Adding these supply chain impacts (which we call "indirect" impacts) to the direct impacts, we see the economic importance of the offices increases. Together, the direct and indirect economic activity associated with physicians' offices totalled a \$28-billion contribution to GDP in 2016 and supported 199,000 jobs. (See Table 3.)

GDP at market prices (\$ millions)	28,090
Final domestic expenditure (\$ millions)	30,611
Less imports (\$ millions)	-2,521
Labour and corporate income (\$ millions)	27,112
Employment	199,044

The supply chain impacts are felt across a wide range of industries. The largest number of jobs supported through these impacts are in the retail trade, manufacturing and finance, insurance and real estate industries. The impacts on retail trade result mostly from the induced impacts as demand for retail products increases when wages associated with employees in the direct and indirect industries are spent in the economy. The manufacturing industry benefits both from indirect and induced demand. On the supply chain side, the forestry products industry creates demand for petroleum and coal, plastic and fabricated metal manufactured products as intermediate inputs into its production process. Additional demand for petroleum and coal, breweries and food manufactured products is created through induced impacts. Demand for finance, insurance and real estate increases through both the supply chain and induced impacts as there is increased demand for services such as deposit credit intermediation and insurance.

Sector	GDP in sector (\$ millions)	% of total impact
Finance, insurance, real estate, rental and leasing and holding companies	1,420	25
Professional, scientific and technical services	574	10%
Manufacturing	470	8%
Wholesale trade	446	8%
Administrative and support, waste management and remediation services	440	8%
Retail trade	384	7%

Total Impact

The final component of the total economic impact is the induced effect. When physicians' offices pay salaries to their employees and profits to their owners, these Canadians then go spend some of this income in the wider economy, on mortgages, rent, groceries, and so on. When we add the induced effect to the direct and indirect effects, we obtain the total economic impact of physicians' offices. The total contribution of physician's offices to GDP was therefore \$33 billion in 2016. The total number of direct, indirect, and induced jobs supported as a result of physicians' offices was 250,000. The total income earned in the economy as a result of the economic activity is \$31.4 billion. The direct, indirect, and induced activity associated with physicians' offices produces \$7.9 billion in net revenues for governments. The economic footprint of physicians' offices also includes a significant amount of tax revenues for governments. Physicians' offices, their supply chain, and the induced economic activity from their employees result in a total of \$7.8 billion in additional revenues for governments. (See Table 5.)

GDP at market prices (\$ millions)	33,383
Final domestic expenditures (\$ millions)	37,370
Less imports (\$ millions)	-3,987

Labour and corporate income (\$ millions)	31,417
Employment	249,741
Total government revenues (\$ millions)	7,883
Taxes on income (\$ millions)	5,112
Taxes on production (\$ millions)	642
Corporate taxes (\$ millions)	1,505

Overall, physicians' offices have a total economic multiplier of 1.07. That means that each raw dollar spent in the sector results in more than a dollar of value-added economic activity. This is very close to the total multiplier for all industries of 1.06, indicating that physicians' offices are about typical in their ability to feed spending back into the Canadian economy. Physicians' offices have an employment multiplier of 7.95, meaning that every million dollars of output in the sector supports about eight jobs. That is somewhat lower than the national total employment multiplier of 10.77, though understandable given the relatively high wages in this sector.

Of the total economic footprint of physicians' offices, most economic activity unsurprisingly occurs in health care and social assistance, with just over two-thirds of the total GDP. However, a variety of other sectors of the economy also see substantial economic activity because of the economic footprint of physicians' offices. The second-largest beneficiary is the finance, insurance, and real estate sector, which receives an additional \$2.3 billion in GDP as a result of physicians' offices. Other major beneficiaries include owner-occupied dwellings (the imputed rent of those employed in physicians' offices living in their own homes), which sees GDP rise by \$939 million; retail trade, which sees an additional \$841 million of GDP; manufacturing, where GDP is \$777 million higher; and professional, scientific, and technical services, where GDP is \$754 million higher than it would be in the absence of physicians' offices. (See Table 6.)

Sector	GDP in sector (\$ millions)	% of total impact
Health care and social assistance	22,477	69%
Finance, insurance, real estate, rental and leasing and holding companies	2,325	7%
Owner-occupied dwellings	939	3%
Retail trade	841	3%
Manufacturing	777	2%
Professional, scientific, and technical services	754	2%

Section 5: Income and Overhead

One difficulty we face is separating the income of physicians from the income of other employees in physicians' offices. Unlike many other types of industry, where there is a clearer distinction between owners of firms and employees, the nature of physicians' offices introduces a degree of confusion into the matter. In many cases, physicians are themselves the owners of their office and pay their staff and

other overhead costs. In other cases, physicians may be on the office's payroll as employees. What's more, some physicians incorporate their practices, while others are not.

These are business decisions, and each physician's office is free to organize its business affairs in the way it feels is best. But what it means for the economic analysis is that physicians' income is spread across different parts of the national accounts. Employee physicians have their incomes recorded as wages and salaries, incorporated physicians have (some of) their income recorded as gross operating surplus, and unincorporated physicians have their income recorded (together with their other employees' incomes) as labour income of the unincorporated sector.

In most industries, we can measure labour income by looking at wages and salaries. Because of the challenges just described, this is not possible for physicians' offices, and there is a lack of other data about net physician salaries. Data is widely available on gross physician earnings: according to CIHI, average gross remuneration for physicians in 2015 (the most recent year for which data is available) was \$344,000 (this figure has been converted to 2016 dollars). However, this is a misleading estimate of actual physician pay, because physicians who run their own practice must pay their office overhead costs—including goods and services and employee salaries—out of their gross remuneration.

There is no national database of spending by physicians' offices, but some studies have attempted to quantify the amount spent on overhead. A 2012 study found that, on average, physicians spent 26 per cent of gross earnings on office overhead.¹⁹ An older study from 2001 examined the issue and found an average overhead level of 34 per cent of gross income for all physicians.²⁰ Physicians themselves reported spending 29 per cent of gross earnings on office overhead in 2016.²¹ These figures imply that the average physician makes between \$227,00 and \$255,000 in net pay after accounting for office overhead.

Section 6: Conclusion

Physicians' offices are a major component of Canada's health care system, providing front-line care in communities across the country. Overall, about 15 per cent of health care spending goes to physicians, making them the third largest category of spending in the health care system. Of the total amount going to physicians, about two of every three dollars goes to physicians' offices.

Given Canada's aging population and normal health care spending inflation, health care expenditures of all types will only continue to increase over the coming years. This means that physicians' offices, as a major component of health care service delivery, will also continue to see spending grow. However, although health care expenditures are often seen from the spending side, they can also be seen from a more optimistic point of view: as contributors to the economic life of their communities.

There are 83,159 physicians practising in Canada, operating a total of 41,113 physicians' offices. The Conference Board of Canada estimates that these offices were responsible for directly adding \$22.3 billion to GDP and for employing 137,000 people. When the indirect and induced economic impacts are included, the total economic footprint of physicians' offices was a \$33.4-billion contribution

¹⁹ Petch et al, "Public Payments to Physicians in Ontario Adjusted for Overhead Costs."

²⁰ Lynda Buske, "Canada's Physicians: The Rising Cost of Doing Business."

²¹ Canadian Medical Association, *CMA Brief: Small Business Perspectives of Physician Medical Practices in Canada*.

to GDP. This total economic footprint also supports 250,000 jobs, \$31.4 billion in income, and generates \$7.9 billion in revenues for governments of all levels.

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