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Overview of the study

Using data from the Canadian System of Macroeconomic Accounts, this study examines how economic output, job levels, and total hours worked in the Canadian dental industry were affected by the COVID-19 pandemic. The study also examines how the industry has recovered from disruptions experienced during this period, providing an insight into how this industry appears to have returned to normalcy.

- The COVID-19 pandemic caused major disruptions in the dental industry. Between 2019 and 2020, total output in the dental industry fell from $18.1 billion to $15.5 billion (-14.6%), while the number of dental office jobs fell by 17,825 (-15.4%) nationwide.
- With the easing of restrictions in 2021, the dental industry started experiencing a recovery. In 2021, output in the dental industry rose by 22.7% to $19.0 billion, surpassing pre-pandemic levels. Dental office jobs increased by 24.1% (23,635 jobs) over the same period, bringing the total number of jobs in the industry above pre-pandemic levels. By 2022, the industry continued to grow, with output increasing 5.5% to nearly $20.0 billion.
- In 2020, all provinces and territories saw a decrease in job levels compared to 2019, with Nunavut (-22.6%), Ontario (-18.6%), and the Northwest Territories (-17.6%) experiencing the largest declines.
- With the easing of restrictions, most jurisdictions experienced increases in dentist office jobs compared to 2019. In 2023, Newfoundland and Labrador (+21.4%), Alberta (+13.7%) and Ontario (+13.1%) experienced the largest increase, while Nunavut (-22.6%), Northwest Territories (-11.8%) still recorded net losses compared to 2019.
- Total hours worked for all jobs in the dental industry also showed notable changes from 2019 to 2023. In 2020, total hours worked declined by 15.7%, to 146.7 million hours due to the impact of the COVID-19 pandemic. In 2021, total hours worked rebounded and rose substantially, increasing 28.3% and adding nearly 42 million hours over the previous year. By 2023, the industry recorded nearly 196 million hours, a 12.5% increase over the pre-pandemic level recorded in 2019.

Looking at the economic impact of the COVID-19 pandemic on the Canadian dental industry

Introduction

The COVID-19 pandemic brought profound changes to Canadian society as public health measures and other restrictions[1] were introduced to limit the spread of the virus and avoid overburdening the health care system. Within the health sector specifically, these changes led to reductions in the types of health care services offered and how they were delivered in Canada.

At the onset of the COVID-19 pandemic, the dental industry was required to suspend non-essential/non-emergency dental treatment and services in all provinces and territories across Canada due to the risks posed by this new threat on patients and dental professionals.[2] Dentistry was identified as the profession with a particularly high risk of COVID-19 infection, due to the close face-to-face contact required and the use of aerosol-generating procedures, such as turbines, handpieces, and air-water syringes, which are necessary to achieve the appropriate standard of treatment.[3,4,5]

This high risk necessitated the dental industry to take additional precautions, such as adopting proper physical distancing practices, additional personal protective equipment and office upgrades to improve ventilation systems. Additionally, there was a significant need for training in various elements of infection control to ensure the safety of both patients and dental professionals. Many of these measures, resulted in a reduced capacity to treat patients compared to pre-pandemic times.[6,7]

Additionally, oral health care providers were further impacted by reduced demand for dental care as one-third of Canadians living in the provinces reported that they did not seek care for mouth or tooth pain due to fear of contracting COVID-19.[8] Combined with pandemic restrictive measures, these factors likely had a direct impact on the number of hours worked, the number of available jobs, and the output generated by the dental industry in the Canadian economy.[9,10]

With the anticipated increase in demand for oral health care resulting from the implementation of the Canadian Dental Care Plan (CDCP) in 2024, it is important to better understand if the Canadian dental industry has recovered from the COVID-19 pandemic. Using data from the Canadian System of Macroeconomic Accounts, this study examines how economic output, job levels, and total number of hours worked for all jobs were affected by the pandemic in the Canadian dental industry. The study also examines how the industry has recovered from disruptions experienced during this period.

For more information on the data used in this study, please refer to the text box "Data sources, methods and definitions".

Canadian Dental Care Plan

In Canada, publicly funded dental insurance has historically been limited to specific populations, with the vast majority of oral health care services being financed through employment-based insurance and out of pocket.[11,12] This means that many Canadians are left without access to optimal dental services. For instance, in 2022, 35% of the population living in the provinces lacked access to dental insurance.[13] Furthermore, approximately three in four Canadians (76%) with private dental insurance reported having seen a dental professional in the past 12 months, compared with just over half (51%) of those without any private insurance plan or access to a government-paid plan.[14]

In December 2023, the Government of Canada launched the Canadian Dental Care Plan (CDCP), which provides oral health care coverage to Canadian residents with an adjusted family net income below $90,000 without access to private dental insurance.[15]

Looking at the economic impact of the COVID-19 pandemic on the Canadian dental industry

Dentistry experienced a decline in output following the onset of the pandemic

The COVID-19 pandemic caused major disruptions in all sectors of the Canadian economy, and the dental industry was no exception.

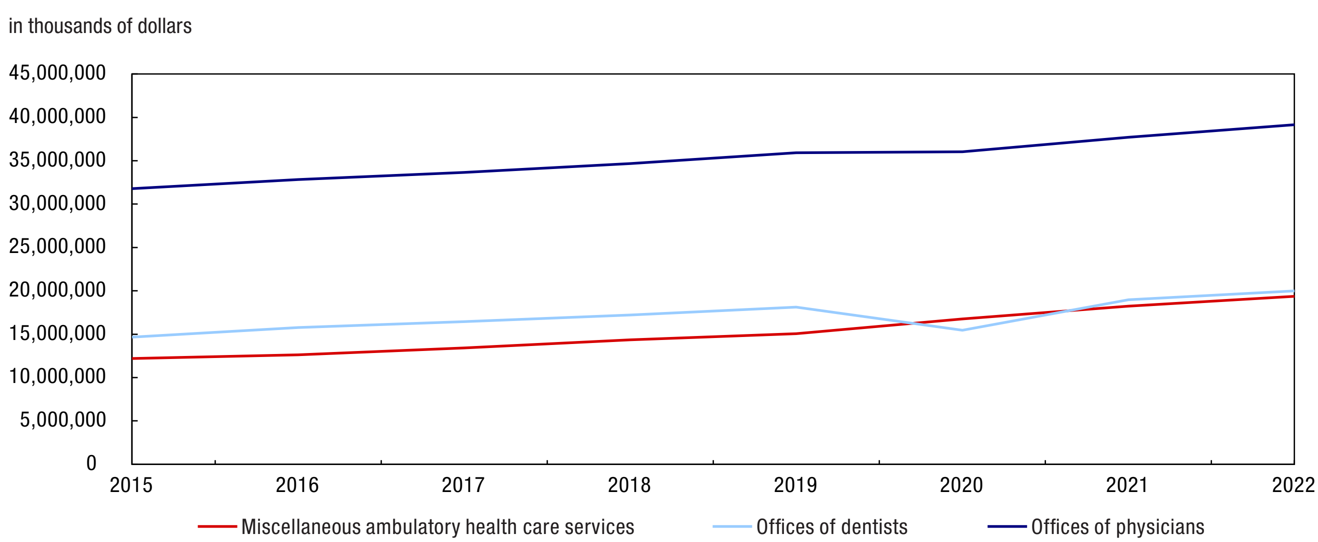
Prior to the COVID-19 pandemic, in 2019, total output for dental offices peaked at $18.1 billion, with 115,950 jobs in the industry.[16] Total output for the dental industry, however, fell by 14.6% in 2020, from $18.1 billion to $15.5 billion (Chart 1).

In 2020, the dental industry experienced declining output for the first time since 2015.[17] The other industries within the ambulatory health care services subsector, such as physician and other health practitioner offices, did not experience declines at the onset of the pandemic as did the dental industry. The offices of physicians and other ambulatory health care services saw their economic output stay the same or increase in 2020, potentially due to their ability to adopt other modes of care, such as virtual healthcare (video or telephone appointments).[18,19]

Economic Output

Total economic output measures the value of goods and services produced by industries in an economy. This indicator is key to measuring economic activity and productivity, with fluctuations reflecting changes in demand for the industry's offerings. Increased demand typically correlates with increased output, while decreased demand leads to reduced output. Output and job creation are closely intertwined, as increased production requires additional labour.

Chart 1
Total output, by selected industries in the health care sector, 2015 to 2022



Sources: Statistics Canada, Table 36-10-0478-01 and Table 36-10-0001-01.

Looking at the economic impact of the COVID-19 pandemic on the Canadian dental industry

The disruptive economic impact of the COVID-19 pandemic is also reflected in the number of jobs in the industry, as 2020 saw a significant setback with the first decline in the number of total jobs since 1997, when tracking of these statistics began.

In 2020, roughly 1 in 6 jobs (15.4%) in the dental industry were lost, representing a loss of 17,825 jobs nationwide, bringing the total of jobs in the industry to 98,125 (Chart 2). Among the ambulatory health care services business sector industries, dental offices experienced the steepest job decline. By comparison, 4.7% of jobs were lost in physician offices during the same period.

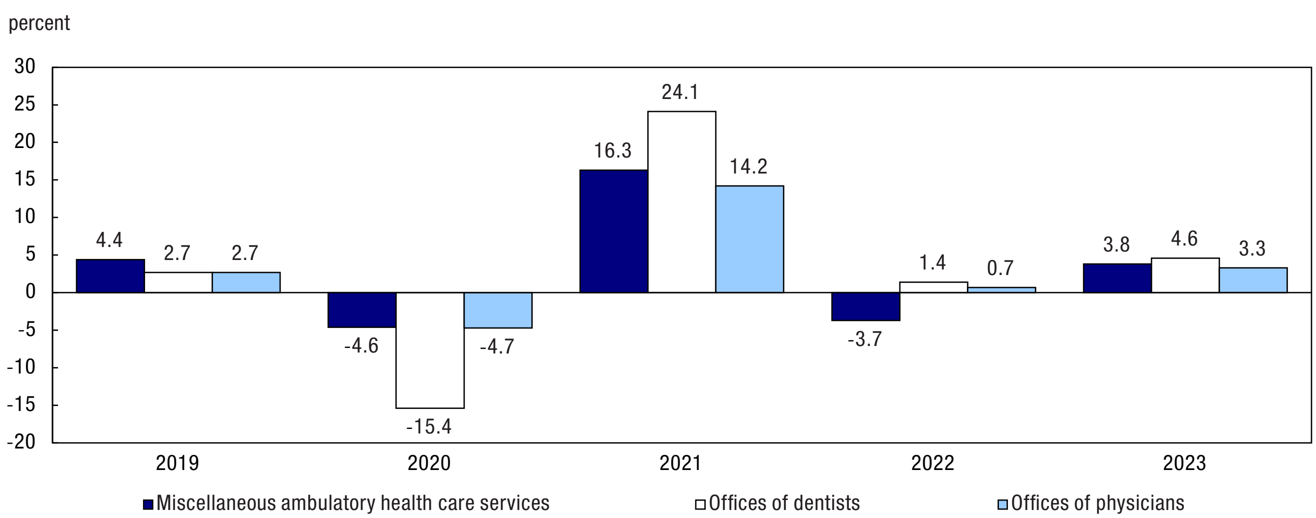
Despite the challenges faced by the dental industry in 2020, a full recovery was seen in 2021. In 2021, total dental economic output rose 22.7% from the previous year to $19.0 billion, surpassing 2019 levels by $851 million. Dental office jobs also experienced a recovery in 2021, with the total number of jobs increasing 24.1% (23,635 jobs) over 2020. This brought the total number of jobs to 121,760, exceeding pre-pandemic levels. The number of jobs continued to grow in 2022 (+1.4%) and 2023 (+4.6%), but at a more moderate pace.

By 2023, the number of dental jobs had reached or exceeded pre-pandemic levels in all provinces and territories, with the exception of Nunavut and the Northwest Territories

The impact of the COVID-19 pandemic on dental office jobs varied significantly across Canadian provinces and territories, reflecting the diverse responses and challenges faced by each jurisdiction, as well as the duration of restrictions on health care providers, which varied from jurisdiction to jurisdiction.

In 2020, all provinces and territories saw a decrease in job levels compared to 2019. Notably, Nunavut (-22.6%), Ontario

Chart 2
Year-over-year changes in total number of jobs, selected health care industries, 2019 to 2023



Note: The percentages displayed represent year-over-year changes starting from 2018.
Source: Statistics Canada, Table 36-10-0480-01.

(-18.6%), and the Northwest Territories (-17.6%) experienced the largest declines in dentist office jobs (Table 1 and Chart 3). By 2021, the situation had improved significantly across the country, with Ontario (+27.8%), Alberta (+27.6%) and British Columbia (+24.0%) posting the largest year-over-year increases in job numbers.

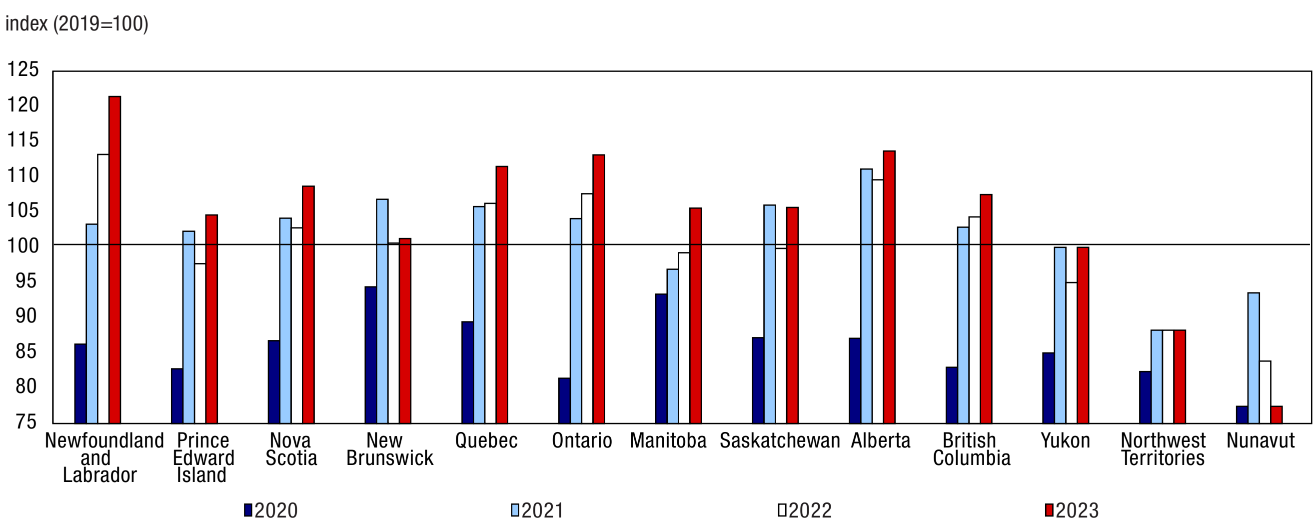
In 2022, several jurisdictions still experienced growth in the total number of dental industry jobs compared to the previous year. Among the provinces and territories that saw increases in jobs, Newfoundland and Labrador (+9.6%), Ontario (+3.4%) and Manitoba (+2.4%) experienced the largest gains.

Table 1
Total number of jobs in the dental industry, by province and territory, 2019 to 2023

Province and territory	2019	2020	2021	2022	2023
	number				
Newfoundland and Labrador	910	785	940	1,030	1,105
Prince Edward Island	435	360	445	425	455
Nova Scotia	2,530	2,195	2,635	2,600	2,750
New Brunswick	1,610	1,520	1,720	1,620	1,630
Quebec	19,250	17,215	20,365	20,455	21,460
Ontario	49,365	40,190	51,375	53,120	55,845
Manitoba	3,235	3,020	3,135	3,210	3,415
Saskatchewan	3,080	2,685	3,265	3,075	3,255
Alberta	16,425	14,305	18,250	18,000	18,670
British Columbia	18,770	15,575	19,310	19,580	20,175
Yukon	100	85	100	95	100
Northwest Territories	85	70	75	75	75
Nunavut	155	120	145	130	120

Source: Statistics Canada, Table 36-10-0480-01.

Chart 3
Change in total dental industry jobs compared with 2019, by province and territory, 2020 to 2023



Note: The horizontal line represents the level of jobs in the dental industry in 2019.
Source: Statistics Canada, Table 36-10-0480-01.

In 2023, the number of jobs continued to grow in most places, with eleven of thirteen jurisdictions now matching or exceeding 2019 levels. The only exceptions were the Northwest Territories, where the number of jobs remained the same as in 2022, and Nunavut, where the number of jobs decreased by 7.7% between 2022 and 2023. Northwest Territories and Nunavut are also the only jurisdictions still below 2019 pre-pandemic levels, in 2023, with gaps of 11.8% and 22.6%, respectively, compared to 2019.

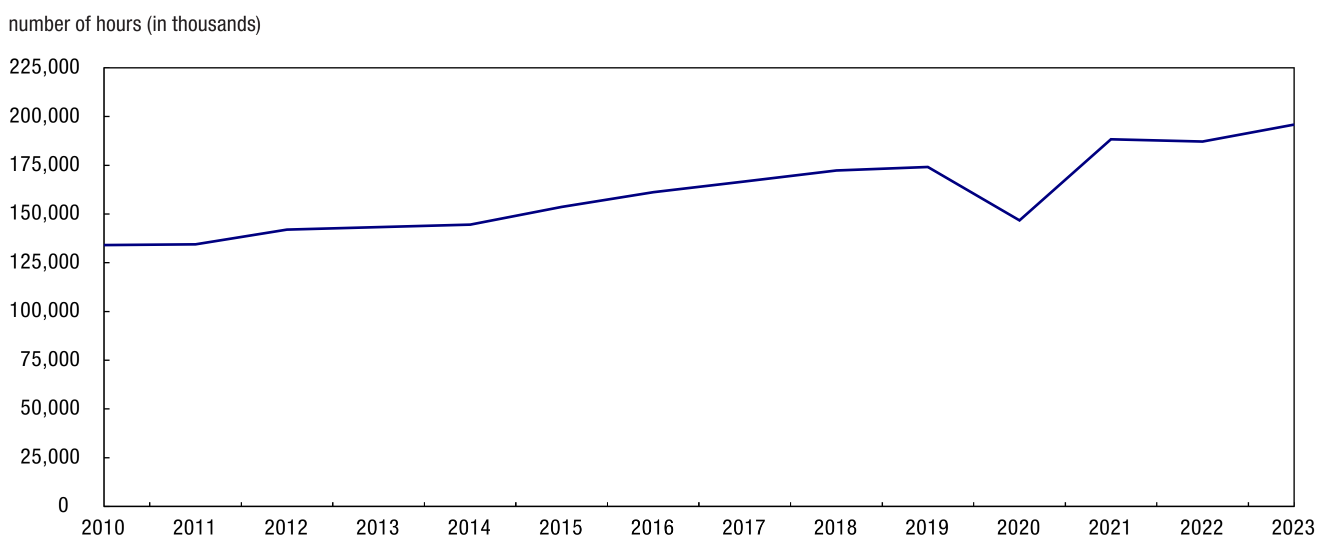
Total hours worked in the dental industry rebounded in 2021

As the COVID-19 pandemic led to business closures across the country, regulated health care industries were limited to emergency procedures, so that all routine procedures were temporarily suspended. This greatly affected the industry's job dynamics. Indeed, in addition to job variations, total hours worked in the Canadian dental industry also showed notable changes from 2019 to 2023.

In 2019, the total hours worked for all jobs in the Canadian dental industry was 174.1 million hours (Chart 4). In 2020, in the midst of the pandemic, the total hours worked for all jobs declined by 15.7% to 146.7 million hours. As dental offices were limited to providing only emergency services, their staffing needs adjusted, reflecting a possible shift toward more specialized workers on site and fewer total working hours.

With the continuing easing of public health measure restrictions, dental offices gradually resumed routine procedures. As personnel rosters adjusted to these changes, there was a notable reversal in the trend of total of hours worked for all jobs. In 2021, the total number of hours worked reached 188.3 million hours, representing a 28.3 % increase from 2020, as well as the highest single-year increase since 2010. In 2023, the number of hours worked for all jobs continued to rise, reaching 195.8 million hours. This represents a 12.5% increase compared with the number of hours worked in 2019.

Chart 4
Total number of hours worked in the dental industry, 2010 to 2023



Source: Statistics Canada, Table 36-10-0480-01.

Conclusion

COVID-related public health measures had a significant negative impact on dental outputs and jobs, with record lows recorded in 2020. The total output dropped 15% in 2020, representing the sole ambulatory health care service to experience losses. This reflected both the impact of the temporary suspension of non-essential/non-emergency dental services at the outset of the pandemic, as well as the limited ability of dental offices, compared with physicians and other health care providers, to shift towards alternative modes of patient care such as virtual appointments.[20] Part of the limited ability of dental offices to shift to virtual care may be explained by the fact that virtual appointments are not intended to replace primary dental care, many of which requires direct physical interactions between patients and providers, but rather to increase access to primary dental care.[21,22] Added to this are the challenges in accessing personal protective equipment[23] during the early stages of the pandemic, efforts to retrofit dental offices with better ventilation,[24] and the associated work involved in properly screening[25] patients for COVID-19 infection.

With the easing of restrictions in 2021, dental offices largely experienced a recovery, though this rebound was not consistently seen across Canada. Although total jobs in the dental industry has reached or exceeded pre-pandemic levels in most jurisdictions, Northwest Territories and Nunavut continued to report fewer jobs in 2023, compared to 2019. Nevertheless, on a national level, the total number of jobs increased consistently between 2021 and 2023, bringing the total number of jobs above pre-pandemic levels. Understanding the pandemic's impact on the dental industry not only illustrates the agility and resiliency of the dental industry, but it also provides insight on where this industry stands as the Canadian Dental Care Plan initiates its implementation.

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Data sources, methods and definitions

Data sources

In this study, output data for years prior to 2021 are derived from Supply and Use tables, while data for 2021 and 2022 are obtained from Symmetric Input-Output tables due to data availability constraints. Insights into labour productivity and related measures by industry are available through 2023.

Definitions

Ambulatory Health Care Services

The Ambulatory Health Care Services subsector comprises establishments primarily engaged in providing health care services to ambulatory patients, either directly or indirectly. According to the North American Industry Classification System (NAICS 2022) this subsector is comprised of the following industry groups:

- 6211 - Offices of physicians
- 6212 - Offices of dentists
- 6213 - Offices of other health practitioners
- 6214 - Out-patient care centres
- 6215 - Medical and diagnostic laboratories
- 6216 - Home health care services
- 6219 - Other ambulatory health care services

For the purposes of this paper, the Ambulatory Health Care Services subsector is broken down into the business sector industries of Offices of physicians (NAICS codes 6211), Offices of dentists (NAICS codes 6212), and Miscellaneous ambulatory health care services (NAICS codes 6213, 6214, 6215, 6216, and 6219).

Dental Industry

In this analysis, the term "Dental Industry" and similar variants refer specifically to the Offices of Dentists Industry (NAICS 621210) as defined by the 2022 North American Industry Classification System (NAICS). This classification encompasses establishments of licensed dental practitioners primarily engaged in the independent practice of general or specialized dentistry, including dental surgery. It should be noted that NAICS 621210 does not include offices of denturists and offices of independant dental hygienists. Instead, businesses such as Offices of Denturists and Offices of Dental Hygienists are classified under Offices of all other health practitioners (NAICS 621390).

Jobs

A job refers to any agreement between an employee and an employer within the industry of offices of dentists, including self-employed individuals, which may result in discrepancies between job counts and actual employment figures due to individuals holding multiple positions.

Output

Output is defined as the goods and services produced by an establishment. For the data referenced in the article, it is measured in current dollars and so includes the effects of price fluctuations. For most industries it can be roughly equated to the revenues earned by the companies involved in production. It should be noted that the GDP series in the business sector is at market prices, while the GDP by industry series is at basic prices. As the valuation of output in the business sector differs from that used at the industry level, these measures are not directly comparable.

Hours worked for all jobs

Hours worked represents the total number of hours that a person devotes to work, whether paid or unpaid. Generally, this includes regular and overtime hours, coffee breaks, on-the-job training, as well as time lost due to momentary interruptions in production when the persons involved remain on the job. However, time lost due to strikes or lockouts, to statutory holidays, vacations, as well as illness, maternity or other personal leave are all excluded from the total number of hours worked.

Quarterly estimates of labour input include two main categories of jobs:

- Jobs held by paid workers, which include paid jobs as well as jobs held by owners of incorporated businesses.
- Jobs occupied by self-employed workers, which comprise owners of an unincorporated business, own-account jobs, and unpaid family-related jobs.

Appendix

Table A.1
Total output, by selected industries in the health care sector, 2015 to 2022

Year	Miscellaneous ambulatory health care services	Offices of dentists	Offices of physicians
	in thousands of dollars		
2015	12,197,960	14,657,683	31,776,892
2016	12,605,411	15,776,154	32,831,339
2017	13,414,172	16,458,662	33,642,882
2018	14,334,808	17,210,325	34,664,435
2019	15,051,472	18,107,437	35,925,414
2020	16,747,064	15,455,766	36,032,583
2021	18,244,505	18,958,915	37,700,637
2022	19,380,179	19,996,239	39,169,458

Note: Data prior to 2015 is available. However, estimates produced during this time frame use a different methodology for selected industries, including the dental care industry, creating a slight break in the trend and limiting comparability before and after 2015.
Sources: Statistics Canada, Table 36-10-0478-01 and 36-10-0001-01.

Table A.2
Total number of jobs, by selected industries in the health care sector, 2018 to 2023

Year	Miscellaneous ambulatory health care services	Offices of dentists	Offices of physicians
	number		
2018	211,930	112,910	127,435
2019	221,340	115,950	130,885
2020	211,135	98,125	124,690
2021	245,580	121,760	142,385
2022	236,400	123,415	143,380
2023	245,295	129,055	148,135

Source: Statistics Canada, Table 36-10-0480-01.

Notes

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17. Data prior to 2015 is available; however, estimates produced during this time use a different methodology for selected industries, including the dental care industry, creating a slight break in trend.
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