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Use of MRI and CT in Private Imaging Facilities in Canada (2021–2023)



Table of Contents

Key Messages	4
Context	4
Objective	4
About This Document	5
Results	5
Survey Results	5
Trends in the Volume of MRI and CT Exams Conducted in Private Imaging Facilities.....	7
Trends in the Costs of MRI and CT Exams Conducted in Private Imaging Facilities.....	7
Funding Sources for MRI and CT Exams in Private Imaging Facilities	8
Limitations	9
Conclusion	9
References	11



List of Tables

Table 1: Average Total Exams, Out-of-Province Patient Scans, and Cost per Scan.....	6
Table 2: Utilization and Costs of MRI and CT Exams in Private Facilities: 2019 to 2023.....	8
Table 3: Average Number of Scans Attributed to Sources of Funding	8

Key Messages

- The private, for-profit imaging landscape is expanding and is anticipated to continue expanding due to changes in some provincial government policies aimed at reducing wait lists.
- The collection of data on private imaging can help to build a complete and comprehensive picture of overall procedural capacity across the country.
- Estimates on the number of publicly funded exams conducted in private facilities can inform the extent to which wait times have been impacted by the shift in some provincial government policies.
- The number of MRI and CT exams conducted at private facilities has increased over the past 4 fiscal years, with the exception of the first year of the COVID-19 pandemic (2020 to 2021).
- Payment through private insurance and out-of-pocket payments were the main funding sources for MRI scans in 2021 to 2023 in the private setting. Provincial health care insurance was the main funding source for CT scans conducted at private facilities.

Context

The demand for medical imaging services in Canada is increasing due to a combination of factors, including an aging population.^{1,2} Most MRI and CT imaging services in Canada are performed in the publicly funded health care setting, although approximately 10% take place in privately owned, for-profit imaging facilities.³ The private imaging landscape is anticipated to expand due to changes in government policy allowing the private delivery of publicly funded imaging services, with a stated primary goal to reduce wait times.² Expansion in chain ownership of private imaging and an increase in the acquisition of private facilities by investment firms across Canada are also anticipated to contribute to growth in the private imaging sector.³

Relatively little is known about the use of private imaging services in Canada. Estimates of the volume of privately delivered imaging can help to build a complete and comprehensive picture of overall procedural capacity across the country. Private imaging utilization data can also inform the extent to which the transfer of publicly funded exams to the private sector has been successful in reducing wait times, as well as provide insight on the implications for health system management.

This report updates information from a previous CADTH report, [Private Imaging Facilities in Canada: MRI and CT](#), which described results of a survey that covered utilization of MRI and CT exams in private clinics in the 2 prior fiscal year periods of 2019 to 2020 and 2020 to 2021.⁴

Objective

The objective of this report is to provide information on the number and cost of MRI and CT exams conducted during the 2021 to 2022 and 2022 to 2023 fiscal years in Canadian privately owned imaging

facilities. This report summarizes the results of a survey distributed to private imaging facilities in Canada that offer MRI and/or CT exams.

About This Document

Privately owned facilities in Canada that offer MRI and/or CT exams were identified through the previous survey report⁴ and CADTH's Canadian Medical Imaging Inventory (CMII).⁵

Private MRI and/or CT facilities were invited by email to complete a survey that included 4 two-part questions for each imaging modality. The survey questions focused on the total number of exams performed during the 2021 to 2022 and 2022 to 2023 fiscal years; whether the scans were for residents from within or outside of the province; the sources of payment for the scans (e.g., provincial health insurance, workers' compensation boards, personal insurance, or out-of-pocket payments); and the average cost of the scans. Both English-language and French-language versions of the survey were offered to survey participants in Quebec and New Brunswick. The survey was emailed to participants beginning on July 17, 2023, and data collection closed on September 15, 2023. One email follow-up reminder was sent to all nonresponders.

Results

At least 68 privately owned imaging facilities in Canada offer MRI and/or CT scans. Seven provinces (British Columbia, Alberta, Saskatchewan, Ontario, Quebec, New Brunswick, and Nova Scotia) have 1 or more private imaging facilities that offer MRI and/or CT. Private imaging facilities that offer MRI or CT exams are not available in any of the territories, Manitoba, Newfoundland and Labrador, or Prince Edward Island.

For the purposes of this report, private imaging exams refer to exams billed to payment sources other than provincial health insurance plans (e.g., private insurance, worker compensation boards, or out-of-pocket payments). The term *facilities* used in this report refers to privately operated medical imaging facilities that accept private payment.

Survey Results

Eight of the 68 private diagnostic imaging facilities identified completed the survey. The responses received were from facilities in British Columbia, Alberta, Saskatchewan, and Quebec. Seven of the survey respondents offer MRI scans, and 3 offer CT scans.

Volume of MRI and CT Exams Conducted in Private Imaging Facilities

MRI Exams

The average (mean) number of MRI scans performed at a single private facility was 4,703 (ranging from 531 to 12,194) during the 2021 to 2022 fiscal year, and 5,178 (ranging from 569 to 12,389) during the 2022 to 2023 fiscal year ([Table 1](#)). The median number of MRI scans performed at a single private facility was 3,232 during the 2021 to 2022 fiscal year, and 3,694 during the 2022 to 2023 fiscal year. It is noted that some

private facilities may have more than 1 unit, which may contribute to the broad range of exam volumes. Data were from 7 survey responses for both fiscal years.

One survey respondent provided information on the number of MRI exams performed for patients from out-of-province: 4 in the 2021 to 2022 fiscal year, and 34 in the 2022 to 2023 fiscal year. Two respondents noted that no exams were performed for patients from out-of-province, and the remaining did not provide a response to this question.

CT Exams

The average number of CT scans performed at a single private facility was 4,376 (ranging from 1,984 to 8,951) during the 2021 to 2022 fiscal year, and 7,251 (ranging from 2,599 to 10,472) during the 2022 to 2023 fiscal year (Table 1). The median number of CT scans performed at a single private facility was 2,193 during the 2021 to 2022 fiscal year, and 8,683 during the 2022 to 2023 fiscal year. It is noted that some private facilities may have more than 1 unit, which may contribute to the broad range of exam volumes. Data were from 3 survey responses for both fiscal years.

Two survey respondents included information on CT exams performed for patients from out-of-province: an average of 4 (ranging from 3 to 5) during the 2021 to 2022 fiscal year, and an average of 14.5 (ranging from 4 to 25) during the 2022 to 2023 fiscal year. The third survey respondent noted this information was not available for either fiscal period.

Costs of MRI and CT Exams in Private Imaging Facilities

MRI Exams

The average cost per MRI exam was \$748 (ranging from \$625 to \$990) in the 2021 to 2022 fiscal year, with a median cost of \$688. In the 2022 to 2023 fiscal year, the average cost per MRI exam was \$762 (ranging from \$640 to \$990), with a median cost of \$720 (Table 1). Data were from 6 survey responses in the 2021 to 2022 fiscal year and 7 survey responses in the 2022 to 2023 fiscal year.

CT Exams

The average cost per CT exam was \$301 (ranging from \$192 to \$470) in the 2021 to 2022 fiscal year, with a median cost of \$241. In the 2022 to 2023 fiscal year, the average cost per CT exam was \$310 (ranging from \$192 to \$490), with a median cost of \$248 (Table 1). The costs of exams do not include extra costs for more complex scans of certain body parts, additional costs for the use of contrast media, or discounts for repeat scans. Data were from 3 survey responses for both fiscal years.

Table 1: Average Total Exams, Out-of-Province Patient Scans, and Cost per Scan

MRI and CT scans	2021 to 2022 fiscal year		2022 to 2023 fiscal year	
	MRI, mean (range)	MRI, median	MRI, mean (range)	MRI, median
Number of total scans performed	4,703 (531 to 12,194)	3,232	5,178 (569 to 12,389)	3,694
Number of out-of-province MRI scans	4 ^a	0 ^a	34 ^a	0 ^a

MRI and CT scans	2021 to 2022 fiscal year		2022 to 2023 fiscal year	
Cost per scan (\$)	748 ^b (625 to 990)	688 ^b	762 (640 to 990)	720
CT	CT, mean (range)	CT, median	CT, mean (range)	CT, median
Number of total scans performed	4,376 (1,984 to 8,951)	2,193	7,251 (2,599 to 10,472)	8,683
Number of out-of-province MRI scans	4 ^c (3 to 5)	4	14.5 ^c (4 to 25)	14.5 ^c
Cost per scan (\$)	301 (192 to 470)	241	310 (192 to 490)	248

Note: All costs given in Canadian dollars.

^aData from 1 facility.

^bData from 6 facilities.

^cData available from 2 facilities.

Trends in the Volume of MRI and CT Exams Conducted in Private Imaging Facilities

CADTH compared the volume of MRI and CT exams conducted in private facilities over the past 4 fiscal years (between 2019 and 2023) using the 2022 survey report data.⁴

The volume of MRI and CT exams in private facilities decreased in the 2020 to 2021 fiscal year, the first full year of the COVID-19 pandemic. Exam volumes subsequently increased markedly over prepandemic estimates in the 2 most recent fiscal years (2021 to 2023). The overall average increase in exams over the 4-year period was approximately 38% for MRI, and 339% for CT ([Table 2](#)). The survey respondents differed between the 2 surveys, with 3 of the 6 facilities that provided information for the 2022 survey also completing the 2023 survey. This may compromise the reliability of the comparisons.

The overall increase in exams may, in part, reflect easing of pandemic restrictions (such as delaying screening or non-urgent exams) and patients returning for diagnostic exams that had been postponed during the earlier period of the pandemic.⁶⁻⁸ It is possible that some individuals may choose to pay out-of-pocket for exams while postpandemic backlogs and wait lists are addressed, and that the overall volume of these exams may potentially subside over time.

Trends in the Costs of MRI and CT Exams Conducted in Private Imaging Facilities

CADTH compared the costs of MRI and CT exams in private facilities over the past 4 fiscal years (between 2019 and 2023) using the 2022 survey report data.⁴

Average and median costs for both MRI and CT exams at private imaging facilities decreased slightly over the last 4 fiscal years. However, the cost per scan for CTs in 2019 to 2020 and 2020 to 2021 is based on information from a single facility and may not accurately reflect costs at all facilities across Canada. The overall average decrease in exam costs over the 4-year period was approximately 3% for MRI, and 34% for CT ([Table 2](#)).

Table 2: Utilization and Costs of MRI and CT Exams in Private Facilities: 2019 to 2023

MRI and CT scans	2019 to 2020 fiscal year		2020 to 2021 fiscal year		2021 to 2022 fiscal year		2022 to 2023 fiscal year	
	MRI, mean (range)	MRI, median	MRI, mean (range)	MRI, median	MRI, mean (range)	MRI, median	MRI, mean (range)	MRI, median
Number of total scans performed	3,738 (667 to 7,642)	3,322	3,188 (614 to 6,543)	1,672	4,703 (531 to 12,194)	3,232	5,178 (569 to 12,389)	3,694
Cost per scan (\$)	782 (650 to 950)	765	819 (650 to 950)	851	748 (625 to 990)	688	762 (640 to 990)	720
CT	CT, mean (range)	CT, median	CT, mean (range)	CT, median	CT, mean (range)	CT, median	CT, mean (range)	CT, median
Number of total scans performed	1,650 (904 to 2,396)	1,650	1,581 (1,008 to 2,155)	1,582	4,376 (1,984 to 8,951)	2,193	7,251 (2,599 to 10,472)	8,683
Cost per scan ^a (\$)	470 ^a	470 ^a	470 ^a	470 ^a	301 (192 to 470)	241	310 (192 to 490)	248

Note: All costs given in Canadian dollars.

^aData available from only 1 facility.

Funding Sources for MRI and CT Exams in Private Imaging Facilities

The main sources of funding for private MRI exams for both fiscal years were private insurance and patients paying out-of-pocket in the private imaging sector. [Table 3](#) shows the percentage of exams based on sources of funding. Unlike MRI, the main source of funding for private CT exams for both fiscal years was provincial health insurance; however, due to the small number of responses from centres offering CT, these results may not reliably reflect funding of CT exams in private imaging centres across Canada.

The survey asked for information on the percentage of scans funded by different funding sources. The options included: provincial health care insurance (including funding from regional health authorities and workers' compensation boards), private payment (i.e., personal health insurance or patient out-of-pocket payments), federal funding (i.e., from federal government programs), and other (such as research).

Table 3: Average Number of Scans Attributed to Sources of Funding

Sources of funding	Percentage of scans (2021 to 2022 fiscal year)	Percentage of scans (2022 to 2023 fiscal year)
	MRI, % (range)	
Provincial health care insurance	27.5 (0 to 82)	29.5 (0 to 85)
Workers' compensation boards	16.0 (1 to 49)	15.6 (1 to 50)
Private insurance and out-of-pocket	50.4 (8 to 88.7)	51.8 (11 to 90.5)
Federal funding	0.9 (0 to 6)	1.0 (0 to 7)
Other sources	5.3 (0 to 19)	2.2 (0 to 12)

Sources of funding	Percentage of scans (2021 to 2022 fiscal year)	Percentage of scans (2022 to 2023 fiscal year)
CT, % (range)		
Provincial health care insurance	63.4 (0 to 97.2)	64.7 (0 to 98)
Workers' compensation board ^a	0.6 (0 to 1)	1.7 (0.5 to 4)
Private insurance and out-of-pocket	27.8 (0.46 to 81)	28.1 (0.97 to 82)
Federal funding	0	0
Other sources	8.2 (1.6 to 18)	5.3 (0 to 14)

Limitations

The response rate to the survey was 11%, and may not accurately represent all private facilities providing MRI or CT exams across Canada. It is possible that a higher response rate would alter the overall results. Consequently, the generalizability of these findings may be low.

One facility that declined to participate in the survey noted that their shareholders were not comfortable sharing this type of information. Another facility responded that they no longer had an MRI unit and had stopped performing these exams at their centre as of October 2022. Although survey respondents were assured that the data would be aggregated, some facilities may be disinclined to disclose this data due to the proprietary nature of this information. As noted in the previous report, other reasons for not participating in the survey include that this information is considered to be confidential, and that if the information is shared it may threaten private imaging facility businesses.⁴ In addition, private delivery of health care in Canada remains a controversial subject and this may also have contributed to the low survey response rate.^{9,10}

Conclusion

The results of the survey indicate that private imaging facilities conducted an average of 4,940 MRI exams and 5,813 CT exams during the 2 most recent fiscal year periods (2021 to 2022 and 2022 to 2023). The volume of MRI and CT scans at private facilities appears to have increased over the past 4 fiscal years, with the exception of the first year of the COVID-19 pandemic (2020 to 2021). Payment through private insurance and out-of-pocket payments were the main funding sources for MRI exams in the private setting from 2021 to 2023. Provincial health care insurance was the main funding source for CT exams conducted in the private setting from 2021 to 2023. Costs of MRI and CT scans at private facilities may have decreased slightly over the past 4 years.

The private imaging landscape appears to be expanding and is anticipated to continue to expand. This change will likely be driven by some provincial government policies aimed at reducing wait lists by transitioning some key imaging services away from nonprofit governance and a general increase in the number of private facilities operating across Canada.

Low survey response rates limit the generalizability of these findings. Public controversy surrounding for-profit health services in Canada, and the proprietary nature of the data on numbers of procedures performed at private facilities, may explain the limited number of survey responses.

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