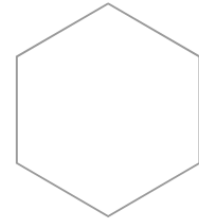


Repetitive Transcranial Magnetic Stimulation in Canada

A Jurisdictional Scan

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Project Data

Targeted web searches and key informant interviews were used to gather data. Web searches focused on Canadian provincial government and health authority websites to identify rTMS programmes and relevant documents. Key informant interviews provided additional context on programme delivery and implementation not captured by the web search. Findings from both sources were synthesised to compare rTMS service models in Canadian provinces.

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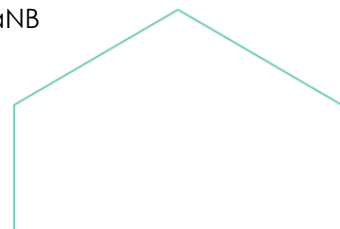


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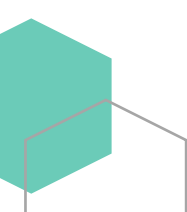


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Abbreviations and Definitions

AHS	Alberta Health Services
ANSR	Atlantic Neuromodulation Solutions and Rehabilitation
CAMH	Centre for Addictions and Mental Health
CANMAT	Canadian Network for Mood and Anxiety Treatment
CISSSS	Centre intégré de santé et des services sociaux
CIUSSS	Centres intégrés universitaires de santé et de services sociaux
ECT	Electroconvulsive Therapy
GAD-7	General Anxiety Disorder (7-item)
GNB	Government of New Brunswick
HAM-D	Hamilton Rating Scale for Depression
iTBS	Intermittent Theta-Burst Stimulation
MAiD	Medical Assistance in Dying
MDABC	Mood Disorders Association of British Columbia
MDD	Major Depressive Disorder
MRI	Magnetic Resonance Imaging
MSB	Medical Services Branch
MSI	Medical Services Insurance
NINET	Non-Invasive Neurostimulation Therapies Laboratory
NSH	Nova Scotia Health
OCD	Obsessive Compulsive Disorder
OHIP	Ontario Health Insurance Plan
OHTAC	Ontario Health Technology Advisory Committee
PHQ-9	Patient Health Questionnaire-9
PTSD	Post-Traumatic Stress Disorder
UNB-REB	University of New Brunswick Research Ethics Board
rTMS	Repetitive Transcranial Magnetic Stimulation
TRD	Treatment Resistant Depression



Executive Summary

Background

In Canada, Repetitive Transcranial Magnetic Stimulation (rTMS) is a non-invasive brain stimulation technique that is recognised as a first-line treatment for treatment-resistant depression – a form of depression in which standard treatments, such as antidepressants and counselling, have not been successful. Since its approval in 2002, rTMS has increasingly moved from research settings into routine clinical practice, supported by growing evidence of its safety and effectiveness.

This jurisdictional scan was conducted to examine how rTMS is implemented across Canadian provinces. The objective was to capture information on service delivery, including who provides the services, governance and oversight structures, funding models, eligibility criteria, and other elements relevant to programme design and implementation. We conducted a targeted web search, focusing on provincial and regional health authority websites and related online resources such as policy documents and programme descriptions. This was complemented by key informant interviews to address information gaps, provide contextual insight, and validate findings from the web search.

Summary of findings


The scan included nine Canadian provinces, excluding New Brunswick. The three territories were not included due to anticipated challenges in accessing comparable information, as well as project timeline and workload considerations. Information was identified for nearly all jurisdictions, although availability and level of detail varied. Five key informant interviews were conducted with provincial programme leads and clinicians from four provinces, providing valuable contextual insights.

rTMS is available in most provinces, with Prince Edward Island being the only jurisdiction where no public or private service provision was identified.

Service delivery frameworks varied across provinces, ranging from full public health system provision through regional health authorities and hospital-based outpatient clinics to mixed public-private models and, in some instances, predominantly private delivery.

Programmes supported by government funding appeared to have more structured oversight at the provincial level. In contrast, other services were often guided by informal collaborations among clinical experts.

rTMS services are typically led by psychiatrists, with support from nurses and technical staff. A trend towards in-house training methods was also noted.



Funding models differed substantially. Some provinces offer full public funding, while others rely on institutional- or philanthropy-led funding or operate through fee-for-service models in the private sector. In some cases, private providers have the ability to bill government health insurance directly.

In the provinces without full public funding, limited and inconsistent funding was identified as a key challenge to sustainability and access.

While eligibility criteria and treatment protocols were broadly similar across provinces, private providers tended to offer greater flexibility, including the treatment of conditions beyond depression, such as obsessive-compulsive disorder, chronic pain, and post-traumatic stress disorder.

Maintenance treatment varied and was often highly individualised. There was a noticeable shift toward shorter protocols, such as intermittent theta burst stimulation.

Finally, limited real-world evaluation and monitoring information of current programmes was identified. Evaluation and monitoring of current rTMS programmes within routine service delivery appeared limited. Most evaluations were situated in research contexts and focused primarily on patient outcomes, with little publicly available information on ongoing monitoring or quality assurance at the system level.

Introduction

Repetitive Transcranial Magnetic Stimulation (rTMS) is a non-invasive neuromodulation technique that delivers magnetic pulses to specific regions of the brain, typically the left dorsolateral prefrontal cortex, over multiple treatment sessions.^{1,2} Its use in treating major depressive disorder (MDD) is supported by substantial evidence demonstrating clinical efficacy, safety, and patient acceptability.^{3,4} While rTMS is being investigated for a range of other psychiatric and neurological conditions, including post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), and neuropathic pain, these applications are generally supported by more limited or preliminary evidence.⁵⁻⁸

The Canadian Network for Mood and Anxiety Treatments (CANMAT) clinical guidelines for the management of MDD in adults recommend rTMS as the first-line neuromodulation treatment for individuals with treatment-resistant depression (TRD). rTMS is considered preferable due to its non-invasive nature, suitability for outpatient settings, and lower risk of cognitive side effects compared to other neuromodulation treatments such as electroconvulsive therapy (ECT).⁹


However, the implementation and funding of rTMS are influenced by Canada's health care system, which is publicly funded and organised at the provincial and territorial level. All jurisdictions cover core medically necessary services through government insurance plans. The scope of services covered beyond these essentials varies between jurisdictions. Additional coverage is often available for specific populations, including seniors, children, and individuals receiving social assistance. Services not covered by public insurance are typically paid for out-of-pocket or through private insurance plans.¹⁰

Although provinces and territories receive health care funding from the federal government and, as described in the *Health Canada Act*, are expected to adhere to national standards, each jurisdiction has autonomy in determining which additional services are funded, how care is structured, and the range of services available.¹⁰ Consequently, while some health services are consistently accessible nationwide, others differ in availability, delivery, and funding depending on the jurisdiction.

Variations in how mental health services are funded and organised across provinces can influence the availability and structure of specific interventions like rTMS. Exploring these jurisdictional differences can offer context for how rTMS is currently positioned within provincial systems of care.

Brief programme description

In 2024, the New Brunswick Department of Health partnered with Horizon Health Network (New Brunswick's Anglophone Regional Health Authority), Canadian Health Solutions, and the Chalmers Foundation to initiate a two-year pilot providing publicly funded rTMS treatment for MDD.¹¹ The pilot is intended to improve access to this innovative, evidence-based intervention for individuals who have not responded to conventional therapies such as antidepressants or



psychotherapy. Funding for the programme is provided through Medicare, the provincial insurance plan.

Purpose

This jurisdictional scan was conducted on behalf of the Government of New Brunswick (GNB), Department of Health, to support preliminary work to inform the evaluation of the province's rTMS pilot project. The scan aimed to identify and characterise how other Canadian provinces implement and manage rTMS services, thereby providing context and insight for the evaluation. To achieve this, a two-step approach was employed, combining targeted web searches with key informant interviews to capture a comprehensive view of current rTMS programme models across the country.

Scan questions

This jurisdictional scan was guided by the following questions:


1. What Canadian provinces, other than New Brunswick, are providing rTMS?
2. What are the characteristics of these programmes in terms of structure, management, funding, delivery, scope, capacity and service volumes, and patient eligibility criteria?

Methods

Data sources

A two-step, multi-method approach was undertaken, combining a targeted web search with key informant interviews. First, a focused web search was conducted to identify and collect publicly available information related to the delivery of rTMS in Canadian provinces. This included materials related to programme structure, implementation, and models of service provision.

Second, individuals with relevant expertise in the planning or delivery of rTMS services were identified through the web search and were subsequently invited to participate in semi-structured interviews. These interviews were intended to complement and validate the data obtained from the web search by providing further contextual information, such as operational challenges and enabling factors.



This scan focused on Canadian provinces other than New Brunswick. The jurisdictions included Alberta, British Columbia, Manitoba, Newfoundland and Labrador, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Saskatchewan. The three territories were not included due to anticipated challenges accessing comparable information, as well as considerations related to project timelines and workload.

Web search

The targeted web search focused on official provincial and regional health authority websites, supplemented by grey literature sources retrieved via Google's advanced search features. The sources reviewed comprised programme reports, patient-facing materials, policy briefs, news items, testimonials, and other relevant materials related to rTMS service provision. A snowballing technique was employed to follow references within these documents to identify additional pertinent sources.

Key informant interviews

The interviews with key knowledge holders were specifically aimed at obtaining contextual insights and operational perspectives not readily available in the public domain. A semi-structured interview guide was used to ensure consistency between interviews while allowing flexibility for participants to elaborate on issues they considered relevant to rTMS planning and delivery.


Data collection

Web search

Data collection followed a flexible and iterative approach with no predefined standardised search protocol, combining targeted website searches, general Google queries, and snowballing techniques. Official provincial and regional health authority websites were searched using advanced queries (e.g., `site:albertahealthservices.ca rTMS`, `site:novascotiahealthauthority.ca rTMS`) to locate information related to programme delivery, service availability, funding announcements, and other relevant updates. Google News searches (e.g., "rTMS" + [province name]) were also performed to capture any media coverage around policy announcements and service developments.

Institutional sources such as university websites and research centre pages were also reviewed for relevant reports, initiatives, or collaborations involving rTMS. Additional Google searches were conducted to identify private providers or other stakeholders involved in rTMS service delivery. Snowballing was used where applicable to identify further relevant resources.

Searches were primarily conducted in English; however, documents in French were also reviewed when relevant. Key documents and links were saved, and core data were extracted into a spreadsheet for subsequent synthesis (See [Appendix A](#) for a sample list of items used to



guide the data extraction). A separate Excel sheet was continuously updated with contact information for key informants identified during the search.

Key informant interviews

Potential key informants, typically two per province, were contacted via email with an invitation to participate in the study. Reminder emails were sent approximately two weeks after the initial contact if no response was received. To increase the reach and response, gatekeepers at various identified rTMS facilities and organisations were also contacted to facilitate the dissemination of study invitations internally. In addition, participants who completed interviews were invited to recommend or refer other individuals involved in rTMS implementation. Recruitment occurred between May 5 and June 16, 2025.

This phase of the study received ethics approval from the University of New Brunswick Research Ethics Board and is on file as REB 2025-080. All participants received an information sheet and provided written consent prior to participation. Interviews were conducted via Microsoft Teams between June 6 and July 16, 2025, and lasted between 30 to 60 minutes. With participants' permission, interviews were recorded and later transcribed for data analysis and synthesis.

Data analysis


Web-based data were summarised using tables and counts for quantitative elements and narrative descriptions for more qualitative information. Key informant interviews were similarly summarised descriptively. Where relevant, insights from interviews were integrated to expand upon, clarify, or validate web-based findings. Data from both sources were integrated and arranged into thematic categories that reflected various dimensions of rTMS implementation, resulting in a comprehensive overview of provincial practices.

Results

Scope of the analysis

This analysis examines the provision of rTMS across nine Canadian provinces. However, findings are presented for eight provinces only, as the Mental Health and Addictions Division of Prince Edward Island confirmed that rTMS is not currently offered under the province's public insurance coverage. Throughout this report, the term "provinces" refers to these eight jurisdictions.

As the main aim of the scan is to inform the evaluation of New Brunswick's publicly funded rTMS pilot project, we focused primarily on services delivered within the public healthcare system. However, private providers were also explored at a high level in order to examine the extent of availability, costs, eligibility, and general location of these services.



Providers or institutions offering rTMS exclusively within a research context were excluded from the analysis, as the scan focuses on insights derived from real-world clinical practice (i.e., routine clinical settings outside of experimental or research trial settings).

Key informant engagement

A total of 21 potential key informants were identified through document review and snowball sampling. In addition, 19 organisations, primarily identified through document review, were contacted either via a general organisational inbox or through a gatekeeper (e.g., programme coordinator or administrator) to support recruitment efforts.

Of the identified key informants, five individuals completed interviews. Two gatekeepers acknowledged the invitation and circulated it within their networks; however, no additional participants were recruited through this process. Two potential informants were sent an information sheet and consent form, followed by a reminder a few weeks later, but did not respond. One individual indicated unavailability during the study period. All other contacts did not respond to the invitation.

The five informants who participated in the interviews represented four provinces: Manitoba (n=1), Nova Scotia (n=1), Ontario (n=2), and Saskatchewan (n=1).

The landscape of rTMS in Canadian provinces

Within the eight provinces studied, the delivery of rTMS services varies considerably in terms of availability and funding. These differences often reflect local infrastructure and provincial policy direction. As shown in

Table 1 below, models of service delivery range from publicly accessible^a programmes within hospitals and clinics, which may be fully funded by provincial health insurance or partially supported through philanthropic and institutional funding, to independently operated private clinics. Moreover, we found a substantial presence of private providers in the majority of provinces.

In Alberta, Newfoundland and Labrador, and Nova Scotia, rTMS is available through publicly funded hospital or health authority programmes, as well as private clinics. Manitoba operates a hybrid model, offering publicly funded rTMS through a hospital outpatient clinic and via a private provider; this arrangement is supported by provincial billing codes for interventional psychiatry introduced in 2023. In Saskatchewan, publicly funded rTMS is delivered by private

^a Publicly accessible refers to rTMS services available to the general public through public health systems or programmes, regardless of funding model. This includes services that are fully funded by provincial health insurance as well as those that may be partially funded or supported through philanthropic or institutional sources but do not require out-of-pocket payment from patients. Services classified as private generally require patients to pay fees out of pocket or through private insurance.

providers, supported by provincial billing codes for technical fees. In Quebec, rTMS is primarily available through publicly funded Centres intégrés universitaires de santé et de services sociaux (CIUSSS) and Centre intégré de santé et des services sociaux (CISSS) health networks, with some private clinics operating in the province.

In British Columbia, rTMS is available through The Victoria Hospitals Foundation (Island Health's charitable partner), the non-profit Mood Disorders Association of British Columbia (MDABC), and various private providers. The Non-Invasive Neurostimulation Therapies (NINET) Laboratory at the University of British Columbia also offers psychiatric consultations for persons who are considering non-invasive neurostimulation therapies (including rTMS), although details regarding treatment delivery were not identified.¹² The provincial insurance plan covers initial psychiatric consultations at both NINET and MDABC.

In Ontario, rTMS services are primarily delivered by hospital-affiliated academic centres, funded through philanthropic contributions and research grants, as the treatment is not currently covered under the Ontario Health Insurance Plan (OHIP). In addition, numerous private clinics offer rTMS on a fee-for-service basis.

Table 1: Geographic and funding availability in Canadian provinces

Province	Publicly accessible rTMS service(s)	Location(s) (Public)	Number of Private Providers	Location(s) (Private)	Observations
AB	Alberta Health Services (AHS)	Calgary, Edmonton	≥5	Calgary, Edmonton	Publicly funded via AHS; private clinics require out-of-pocket payment or insurance.
BC	Victoria Hospitals Foundation	Victoria, Vancouver	≥5	Burnaby, Nanaimo, Powell River, Victoria, Vancouver	The Victoria Hospitals Foundation is Island Health's charitable partner. MDABC offers rTMS at \$2800 for 30 treatments. Among private providers, treatment costs generally range from \$5400 to \$6500 per course.
MB	Winnipeg Regional Health Authority; BrainWave Clinic	Winnipeg	N/A	N/A	BrainWave Clinic is a private provider delivering publicly funded rTMS. Manitoba has a billing code which allows the private provider to bill for rTMS services.
NL	NL Health Services	St. John's	<5	St. John's	rTMS is publicly funded through NL Health Services. At least one private provider offers treatment on a fee-for-service basis (~\$275 per session)

Province	Publicly accessible rTMS service(s)	Location(s) (Public)	Number of Private Providers	Location(s) (Private)	Observations
NS	Nova Scotia Health Authority (NSH)	Kentville, Dartmouth, Sydney, Truro	<5	Halifax, Bedford	Public provision is supported through NSH with funding from philanthropy, foundations, and the provincial mental health programme. Private providers offer rTMS on a fee-for-service basis.
ON	Centre for Addiction and Mental Health (CAMH); University Health Network; Ontario Shores Centre for Mental Health Sciences; Unity Health Toronto; Providence Care; Harquail Centre for Neuromodulation (Sunnybrook); St. Joseph's Care Group	Toronto, Kingston, Thunder Bay, Ottawa	≥5	Toronto, Ottawa	rTMS is available through multiple academic and hospital-affiliated centres. Services are typically supported through philanthropy, research grants, or institutional funding. Numerous private clinics also offer rTMS on a fee-for-service basis (~\$250 per session).
QC	Centres intégrés universitaires de santé et de services sociaux (CIUSSS): l'Ouest-de-l'Île-de-Montréal; Centre-Sud-de-l'Île-de-Montréal; la Capitale-Nationale; Centre intégré de santé et des services sociaux (CISSS) de la Montérégie-Centre	Montreal, Quebec City, Longueuil	<5	Montreal, Gatineau, Saint-Hubert	rTMS is publicly available through several regional CIUSSS/CISSS networks. A small number of private providers also operate in the province, offering services on a fee-for-service basis.
SK	The Linden Medical Centre; LifeCrest TMS; two other community-based clinics	Saskatoon, Regina	N/A	N/A	rTMS services are delivered by private clinics but publicly funded via the Medical Services Branch (MSB). A billing code is available for technical fees.
AB =Alberta; BC =British Columbia; MB =Manitoba; NL =Newfoundland and Labrador; NS =Nova Scotia; ON =Ontario; SK =Saskatchewan					

Service delivery models and governance structures

Funding

As shown previously, most Canadian provinces currently offer publicly accessible rTMS services. However, the extent and structure of public funding vary considerably between jurisdictions. Public funding for rTMS is available in Alberta, Manitoba, Newfoundland and Labrador, Quebec, and Saskatchewan.¹³⁻¹⁵ In these provinces, implementation and delivery are generally coordinated by provincial or regional health authorities. An exception is Saskatchewan, where rTMS services are delivered exclusively through private clinics; these private providers are authorised to bill technical costs to the Medical Services Branch (MSB). A similar billing arrangement exists in Manitoba, where rTMS is offered at a hospital-based outpatient clinic (St. Boniface Hospital) and by private providers who may also bill the provincial health system under an interventional psychiatry billing code.

In provinces where formal billing codes are not established, some services remain publicly accessible through alternative funding mechanisms. As reported by a key informant, in Nova Scotia, rTMS is not formally funded through the provincial health insurance, as it lacks a billing code and is not included in the Medical Services Insurance (MSI) benefit framework. However, the service is accessible without cost to patients. It is supported through internal funding from Nova Scotia Health (NSH), which covers staffing and space. The equipment was acquired through a combination of grant funding and NSH contributions. Physicians involved in delivering rTMS do so as part of their existing clinical roles, without dedicated billing mechanisms. In Ontario, most publicly accessible services are situated within academic centres or hospital-affiliated centres and are funded through research grants, institutional budgets, or charitable donations. The province also has a substantial representation of private practices offering rTMS.

In British Columbia, public access appears more limited. While rTMS services are not covered by provincial insurance,¹⁶ the Victoria Hospitals Foundation provides the service, which is supported through philanthropy and charitable donations.¹⁷ However, detailed information on access criteria, referral processes, and treatment protocols was not available at the time of writing this report. Furthermore, a non-profit provider, MDABC, was also identified; however, patients pay out of pocket for rTMS services.¹⁸ See [Appendix B](#) for details on public funding models.

Across all provinces, rTMS services delivered outside of publicly funded programmes or designated academic institutions are typically offered through private clinics on a fee-for-service basis. These services are generally paid for out of pocket or are reimbursed through third-party health insurance plans.

Delivery settings

The settings in which rTMS is delivered also varied. In most provinces, services supported by the public healthcare system (either fully or partially funded) are provided in outpatient hospital settings. Where private providers are involved, the delivery setting depends on the structure of individual clinics.

Key informants expressed differing views on the ideal setting. One participant emphasised hospital-based delivery for safety, noting that rare but serious side effects, such as seizures or severe headaches, could be best managed in a hospital. They also suggested that rTMS should be embedded within a stepped-care model in hospitals, ideally in settings that can also provide or refer to ECT, to ensure continuity of care for non-responders. Another informant pointed to the high costs and resource demands of this approach, suggesting community-based settings could improve access and offer more personalised care.

Regardless of setting, all programmes are led by psychiatrists, typically supported by multidisciplinary teams that include nurses and technicians. Generally, psychiatrists are responsible for clinical oversight and treatment planning, with daily treatment delivery carried out by trained technical staff and trained nurses. Many provinces have invested in external training, mainly through institutions like the Centre for Addiction and Mental Health (CAMH) or manufacturer- and vendor-led training and are now working to build local capacity for in-house staff training.

Governance structures

Leadership and oversight structures for rTMS services also differ by province and between the public and private sectors. The organisational setup or governance arrangements is summarised in Table 2.

Table 2: Governance and oversight structures for rTMS programmes by province

Province	rTMS governance and oversight
Alberta	rTMS services are integrated into the provincial health system, with implementation and service delivery overseen by AHS. No specific governance details were obtained.
British Columbia	No information on official governance structures could be identified through web searches. However, the College of Physicians and Surgeons of British Columbia provides guidance on the standards for delivering rTMS. ¹⁶
Manitoba	According to one key informant, following government approval for public funding, the provincial rTMS programme has dedicated funds to hire a manager to ensure oversight. The informant expressed that recent advancements in mental health services were partly supported by a shift in government priorities, with leadership demonstrating greater sensitivity to mental health issues. Public and private clinics reportedly engage in regular communication and participate in an informal quality network.
Newfoundland and Labrador	The province recently consolidated its five regional health authorities into a single entity, NL Health Services. As part of this restructure, mental health services were reorganised, leading to the opening of a centralised Mental Health and Addictions Centre in April 2025. Services previously offered at the Waterford Hospital were relocated to this new site. ¹⁴ No additional details on

	governance structures specific to the provincial rTMS programme were identified.
Nova Scotia	Governance involves multiple layers. Oversight is shared between the Department of Health and Wellness and the Office of Mental Health and Addiction, with implementation delegated to the Nova Scotia Health Authority's mental health programme. Service planning and delivery are carried out in collaboration with hospital foundations, Bell Let's Talk, and other partners.
Ontario	<p>Private and public clinics operate independently, with self-regulated oversight. While Ontario has a Provincial Advisory Committee working to establish clinical standards for public providers, its role remains informal, and its influence is limited due to the lack of dedicated provincial funding and formal oversight mechanisms. Key informants reported this absence of provincial oversight and funding as a significant challenge to service organisation and development.</p> <p>Ongoing advocacy efforts were highlighted by the informants, including OHTAC recommendations, published in 2021, which used extensive methods to demonstrate the clinical and cost-effectiveness of rTMS.¹⁹ The OHTAC proposed a "hub-and-spoke" model, relying on a geographic network to ensure jurisdictional coverage and equitable distribution of services. Despite this, the report has yet to receive a formal government response. Key informants identified planned actions to establish clinical standards, ensure consistency between sites, and develop standardised quality frameworks (e.g., training oversight, multi-year evaluation plans).</p>
Quebec	No information on governance structures could be identified through web searches.
Saskatchewan	Clinics operate independently and under self-regulated oversight.
AHS = Alberta Health Services; OHTAC = Ontario Health Technology Advisory Committee	

As shown in Table 2, governance structures for rTMS services differ between provinces, ranging from centralised oversight within provincial health systems to models characterised by independent or clinic-level governance. In some cases, formal governance frameworks are lacking altogether. These variations may have implications for the consistency and accessibility of care. In particular, the contextual differences are likely to influence how individuals access rTMS services, which is explored further in the following section.



Pathways to care

Access to rTMS varies between provinces and between public and private service models, particularly in relation to eligibility criteria and referral processes. All providers require a referral; however, the source and conditions under which referrals are accepted differ. For instance, in Nova Scotia, rTMS services in the public sector require referrals from psychiatrists, while private clinics may also accept referrals from family doctors and psychologists. In Manitoba, Ontario, and Saskatchewan, referrals are accepted from a broader range of practitioners, including general physicians and nurse practitioners.

Referral typically follows established clinical pathways, with a primary diagnosis of MDD or TRD required. Most public programmes do not accept patients whose primary diagnosis is PTSD or OCD unless these are comorbid with MDD or TRD. Private clinics generally apply less restrictive eligibility criteria and may serve a wider range of patients, including those with non-MDD conditions such as PTSD or anxiety disorders. According to the key informants, suitability assessments are typically conducted at both intake and the start of treatment in some provinces.

Exclusion criteria also vary by site. Common exclusion criteria include a history of psychosis, epilepsy or uncontrolled seizure disorders, metal in the head or neck, and active substance use disorders. Nova Scotia applies stricter criteria, excluding individuals with unstable medical conditions (e.g., cardiovascular disease, diabetes), a history of psychosurgery or deep brain stimulation, recent self-harm, current suicidal ideation, and pregnancy or plans to become pregnant.

Age eligibility is also provider-specific and often depends on the site's capacity to manage younger patients. For example, in Saskatchewan, services are available to individuals aged 14 to 90. In Ontario, some providers limit service to adults, whereas others, such as Sunnybrook, accept patients aged 13 and older. In Nova Scotia, Alberta, and Newfoundland and Labrador, services are generally offered to individuals aged 18 and above.

Table 3 below provides a high-level summary of clinical indications, eligibility criteria, and referral pathways for publicly funded rTMS programmes.

Table 3: Public rTMS clinical indications and access criteria

Province	Indications covered	Age eligibility and referral criteria
Alberta	TRD	≥18 years; referral required from psychiatrist or family physician; adolescents may be considered under care of rTMS experts
British Columbia	TRD	No publicly available information at time of reporting
Manitoba	TRD	Referral required from psychiatrist, general physician, or nurse practitioner
Newfoundland and Labrador	MDD	18-65 years; referral required from psychiatrist
Nova Scotia	TRD	≥18 years; referral required from psychiatrist
Ontario	TRD including MDD and bipolar disorder	≥13 years; referral required from psychiatrist, general physician, or nurse practitioner
Quebec	Medication-resistant conditions: depression, auditory hallucinations, OCD, bipolar disorder, postpartum depression	Referral required from psychiatrist or family physician
Saskatchewan	TRD	14-90 years; referral required from psychiatrist, general physician, or nurse practitioner


MDD = major depression disorder; **OCD** = obsessive compulsive disorder; **PTSD** = post-traumatic stress disorder; **TRD** = treatment-resistant depression.

Clinical practice

Service capacity and protocols

There is considerable variation in service volumes and wait times, both by province and provider type. Public programmes are generally constrained by staffing levels and equipment availability. In some areas, particularly those with larger populations, wait times range from approximately four weeks to as long as eight months, although some sites report no wait list at all. Service volumes depend on local capacity, including staff availability and the number of machines in operation. Daily caseloads vary widely, with some sites treating as few as eight and others exceeding 20 patients per day. In Ontario, a key informant noted that operating sites are expected to treat 120 to 125 patients annually to maintain funding.

Most sites report using a range of rTMS protocols depending on patient characteristics. Neuronavigated rTMS, which requires a magnetic resonance imaging (MRI) scan for precise targeting, is used only in select cases. Informants generally agreed that its clinical benefit does not outweigh the additional time and cost involved. Limited access to MRI and diagnostic processing was also mentioned as a barrier to wider use, both for individual patients and for



programme expansion. Furthermore, many sites currently prioritise intermittent theta burst stimulation (iTBS) protocols, which significantly reduce the duration of each treatment session and are particularly beneficial for patients who must travel long distances to receive care.

Most key informants indicated that they do not follow formal protocols for regular equipment maintenance or upgrades. Maintenance typically follows manufacturer warranty and servicing schedules, with parts replaced at end-of-life or when malfunctions occur. Updates are also implemented in line with evolving clinical protocols and manufacturer recommendations.

Clinical outcomes and maintenance

Most public programmes collect some form of clinical outcomes data, often using standardised rating scales such as the Patient Health Questionnaire-9 (PHQ-9), Generalised Anxiety Disorder-7 (GAD-7), or Hamilton Depression Rating Scale (HAM-D). These assessments are typically administered at baseline, during, and after treatment course. The results are primarily used for clinical monitoring rather than systematic evaluation. Some sites, such as CAMH in Ontario, also collect quality-of-life metrics.


Maintenance and follow-up protocols also showed variation. Informants noted the absence of standardised maintenance models, with decisions left to the discretion of individual providers. Some publicly available rTMS programmes offer scheduled maintenance or tapering sessions following an acute treatment course, typically on a weekly or biweekly basis for patients who responded well to initial treatment. Others provide follow-up only when clinically indicated. In some provinces, reassessment is required before maintenance treatment can be provided, although a new referral is not typically necessary.

Quality, challenges, and innovations

While clinical delivery models are beginning to improve through increased access and availability, questions of service quality, sustainability, and innovation become increasingly relevant. This section outlines key challenges and gaps in evaluation, as reported by key informants and identified in available documents.

There are currently no standardised maintenance or follow-up protocols in place, and approaches to evaluating outcomes vary by site. In publicly funded programmes, quality assurance typically relies on clinical supervision, adherence to standard treatment protocols, and peer consultation. In Manitoba, for example, public and private providers report regular communication and have established informal quality networks to support consistent clinical standards.

One of the most reported challenges is the lack of sustainable funding. Many programmes operate through a combination of grants, philanthropic support, or temporary funding arrangements, which limits their ability to plan for long-term planning and expansion. The introduction of a billing code is described as a significant step toward sustainability, especially



given the cost of treatment in private settings and the high proportion of patients with depression who rely on disability or social assistance.

Geographical access remains an important key barrier to equitable service provision. rTMS requires daily sessions over several weeks, and for patients living in rural or remote areas, this can be a significant economic and time burden. Most services are concentrated in large urban centres, and while some provinces offer travel subsidies, the time commitment and cost of commuting (or temporarily relocating) can be unaffordable. Only a few sites reported offering travel support for patients outside their delivery regions; most indicated that patients are responsible for arranging and financing their own transportation.

In terms of innovation, accelerated treatment protocols, particularly iTBS, are being widely adopted to reduce daily treatment time. This is especially beneficial for patients who must travel long distances for care.

Additional observations from informants include a seasonal variation in treatment uptake, with higher attendance during the winter months. Informants also emphasised the broader role of rTMS within mental health systems. In Manitoba, for example, a key informant noted that the availability of rTMS has become particularly important in the context of Medical Assistance in Dying (MAiD) legislation. Since MAiD for psychiatric conditions requires that patients have exhausted all reasonable treatment options, ensuring the availability of rTMS carries clinical and ethical implications.

No formal process evaluations (such as service assessments examining programme expectations, wait times, or patient experiences) were identified through the web search. Informants validated this gap, noting that no formal evaluations or monitoring have been conducted to date. In Ontario, this gap was attributed to the lack of a provincial programme and centralised oversight. In Nova Scotia, the informant noted that programme evaluation has not yet been undertaken due to the early stages of service implementation. While some key informants mentioned plans for future programme evaluations, current evidence is largely limited to research initiatives and patient outcome assessments, including retrospective chart reviews and clinical trials evaluating effectiveness.

In Alberta, provincial clinical guidelines developed by Alberta Health Services recommend the routine collection of specific data to ensure consistency, enable future evaluations, and support province-wide analysis²⁰. Interim evaluation findings suggest improvements in depressive symptoms and overall well-being among programme participants.²¹

Conclusions

This jurisdictional scan sought to identify and characterise how Canadian provinces implement and manage rTMS services. The findings reveal variations in delivery, governance, and funding between provinces. Currently, rTMS is available in almost all Canadian provinces, with the exception of Prince Edward Island, through a mix of public and private providers.

Publicly funded programmes are typically delivered in outpatient hospital settings with psychiatrist-led multidisciplinary teams. Clinical eligibility criteria are largely consistent, focusing on MDD and TRD. Protocols vary by site, though iTBS is increasingly used, reflecting efforts to improve accessibility and convenience for patients.

Governance structures differ substantially, ranging from formal provincial oversight to more informal or self-regulated models. Programmes supported by government funding generally indicated more structured oversight at the provincial level. However, the available data do not allow for conclusions about how these differences affect service quality or consistency.


The lack of sustainable, dedicated funding was identified as a key challenge in some jurisdictions. Many programmes depend on short-term grants or philanthropic support, which limits their capacity for long-term planning and expansion. While private providers may help improve access, treatment costs remain a significant barrier for economically disadvantaged populations. Geographic barriers were also noted by key informants, with patients in rural or remote areas facing logistical and financial challenges in accessing care.

There is a general absence of standardised protocols for equipment maintenance and follow-up care. In addition, most rTMS programmes do not routinely evaluate service implementation or quality beyond individual patient clinical monitoring. While some provinces may be conducting internal evaluations, these are not widely shared or publicly available.

Finally, while several provinces offer publicly funded rTMS services, formal evaluations and structured assessments of implementation remain limited. The variation observed in governance, delivery models, and clinical protocols may offer relevant insights for ongoing implementation efforts in New Brunswick.

Limitations

This jurisdictional scan has some limitations that should be considered when interpreting the findings. While the web search provided valuable insights into rTMS service delivery, the findings are not exhaustive. Information available online may be outdated, incomplete, or inconsistently presented across jurisdictions. As direct consultation with all service providers was not possible, the accuracy and validity of web-sourced information could not be confirmed, and some findings may not reflect recent changes in service delivery. In addition, providers with limited or no online presence may be underrepresented, particularly smaller or less resourced



programmes. However, interviews with key informants confirmed several findings from the web search.

The key informant component was limited by a low response rate. Despite reminder emails, gatekeeper engagement, and an extended recruitment period, only a small number of interviews were completed. These represented only half of the provinces that were identified as having publicly accessible rTMS services. As a result, the findings may not fully reflect the diversity of experiences and service delivery models across jurisdictions.

The perspectives shared by informants may also reflect recall bias, institutional priorities, or their specific role and responsibilities within their organisation. These factors may limit the completeness, comparability, and generalisability of the data. The absence of multiple informants per province also limited the ability to triangulate and validate findings. However, the insights obtained were considered relevant and sufficient to inform the objectives of this scan.

Despite these limitations, the jurisdictional scan provides a valuable comparative analysis of rTMS service delivery models in Canadian provinces. The use of a multi-method approach, combining web searches with key informant interviews, enabled some level of data triangulation and helped to contextualise findings with complementary insights.

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Appendix A: Key data extraction items

Items extracted in relevant documents and websites

1. Province name
2. Brief history of the programme (rationale, objective, policy context)
3. Departments/teams/organisations involved
4. Description of staff members' roles and responsibilities
5. Whether the service is provided by provincial health services only or whether there are private providers offering the same/similar services
6. Whether the programme has been evaluated in any way and the key findings
7. The inclusion/exclusion criteria used to access the service and who makes the determination (e.g. psychiatrist, GP, etc.)
8. The geographical scope of the programme (e.g., local, regional, province-wide)
9. The approach to rTMS being used (regular or neuronavigated)
10. The capacity of the programme in terms of the number of patients or clients served and service volumes
11. The protocol for maintenance (frequency and duration)
12. Information about the machines used in delivering services (make, model, maintenance, upgrades)
13. Challenges and other considerations

Appendix B: Public funding models

Province	Public Funding Model	Delivery Model	Notes
Alberta	Formal public funding	Provincial health authority (Alberta Health Services)	—
Manitoba	Formal public funding	Provincial health authority and private clinics	Private providers can bill province directly
Quebec	Formal public funding	Regional health authorities (CISSS/CIUSSS)	—
Newfoundland and Labrador	Formal public funding	Provincial health authority	—
Saskatchewan	Formal public funding	Private clinics only	Private providers can bill province directly
Nova Scotia	No formal billing code	Public services funded via internal budgets and grants	Covers operational costs and staff salaries
Ontario	No formal billing code	Academic centres and research programmes	Funded through philanthropy/research grants; substantial representation of private practices
British Columbia	No formal billing code	Public service funded by charity and philanthropy	One no-cost provider (The Victoria Hospitals Foundation) affiliated to Island Health, but programme details unclear