CADTH Special Report

Equity-Focused Health Technology Assessment at CADTH

Renata Axler
Amil Reddy
Farah Husein
Nicole Mittmann
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Health Inequities in Canada

As population diversity increases in Canada, there is a greater need for targeted interventions to address equitable access to care and equitable treatment across populations and groups. If current trends continue, by 2041, half of the population in Canada will be made up of immigrants and their children born in Canada, and 2 in 5 people will be part of a racialized group.¹ Health inequities in Canada exist, are persistent, and in some cases are growing.² Focusing on equity within the processes of health technology assessment (HTA) can help policy-makers and decision-makers implement solutions that avoid perpetuating or exacerbating inequities and develop more equitable health care systems.

Canada's geography and health services infrastructure often lead to access disparities and significant urban, rural, and remote divides based on geographic location.³ Significant health inequities have been observed in Canada for people with lower socioeconomic status, Indigenous Peoples, immigrants, racialized people, 2SLGBTQ+ people, and people living with physical and mental limitations.² Socioeconomic contexts are associated with differing health outcomes, and health outcomes worsen progressively as socioeconomic status declines.⁴ Socioeconomic gradients can be observed across life expectancy and mortality across Canada, and health outcomes tend to be worse in areas with high concentrations of First Nations, Inuit, and Métis people.²

Health is thus determined in part by a multitude of overlapping social determinants, including education, employment, and income. Further, experiences of discrimination, racism, and historical trauma are also important determinants of health for certain groups, such as 2SLGBTQ+ people, those with disabilities, immigrants, Indigenous Peoples, and racialized groups.⁴,⁵ Disability is also tied to social determinants; poverty can lead to disability and disability can lead to poverty.⁴ The 2017 Canadian Survey on Disability reported that approximately 1 in 5 people in Canada aged 15 years or older had 1 or more disabilities that limited their daily activities.⁴ Lower socioeconomic status and states of poverty are also related to structural drivers of inequity, such as food insecurity.²

Equity and HTA

HTA is the systematic evaluation of the direct and intended effects — and the indirect and unintended consequences — of drugs, diagnostic tests, and medical devices or procedures (collectively referred to as health technologies).⁶⁻⁸ A number of studies have reviewed the role of equity in the HTA space and have highlighted that health equity is often not considered part of HTA, and that fundamental change to the conduct of HTA is necessary to advance health equity.⁹,¹⁰ Further, the potential for HTA to impact health inequities by informing health care priority-setting decisions has been described.¹¹ Authors have noted that HTAs tend not to have consistent, clearly defined measures of health equity impact, methods to include health equity-oriented measures into assessments, or infrastructures of primary data to support these assessments.¹⁰,¹¹ These authors have suggested that the introduction of equity-focused methodologies into HTA can facilitate a systemic and comprehensive focus on health equity within HTA, to enable the delivery of more equitable health outcomes.
Introducing equity within HTA and accompanying evaluation frameworks can also have upstream impacts for health innovators by signalling the importance of prioritizing equitable impacts or outcomes in health technologies. As health equity is increasingly incorporated into HTA processes, it will become increasingly possible to reward manufacturers who invest in products that address health inequities. Likewise, policy leaders and decision-makers have a responsibility to hold HTA practitioners accountable for integrating equity into all aspects of HTA.

Several tools or resources have also been developed to support this focus on health equity within HTA. Following from work by Culyer and Bombard, Benkhalti et al.'s Equity Checklist for Health Technology Assessment (ECHTA) provides a practical tool for identifying points of inequity that can be addressed within 5 phases of HTA: scoping, evaluation, recommendations and conclusions, knowledge translation and implementation, and reassessment. Within each of these phases of HTA, the ECHTA identifies areas in which HTA can address equity considerations through a series of prompting questions that span the HTA life cycle.

Further, explicit methods or approaches to address and advance health equity have been adopted by HTA agencies internationally, such as the Institute for Clinical and Economic Review (ICER) in the US. ICER has proposed and recommended several methods and approaches to support improving health equity for equity-deserving groups through HTA. These include direct engagement with patients throughout HTA processes to learn about their experiences and understand potential impacts on health equity; implementation of minimum thresholds for adequate representation of racialized populations in clinical trials; avoidance of calculating cost-effectiveness estimates for subpopulations defined solely by race categories or socioeconomic status; avoidance of using quantitative equity-informative economic evaluation as a substitute for deliberative processes that integrate multiple important social values; and the use of deliberative processes to highlight structural aspects of the health care system that should be changed to ensure that disparities are not worsened with the introduction of new interventions. CADTH is considering how approaches such as these can be incorporated into HTAs and related outputs in the Canadian context.

The implementation of these methods to address health equity within HTA requires robust data infrastructures to support the identification of domains of inequity and how health technologies — or the approaches to their assessment — might reinforce, exacerbate, or redress health inequities. However, these data are often challenging to collect and to locate, and may require a broadening of the types of evidence normally considered in HTA practice. While the evidence base to support the identification of health inequities grows, HTA practitioners may have a role in identifying domains of missing data and in identifying areas for research investment to improve decision-making.

How CADTH Considers Equity in HTAs
CADTH is committed to applying a lens of inclusion, diversity, equity and accessibility (IDEA) across its work, and this commitment is reinforced in CADTH’s Strategic Plan.
CADTH has introduced several approaches and methodologies to centre equity considerations in its assessments of health technologies. Attention to addressing health inequities has been embedded into multiple aspects of CADTH’s work, including processes for topic identification and scoping; literature searches and information retrieval; health technology reviews of pharmaceutical products, medical devices, and clinical interventions, including in health economic evaluation and the Early Scientific Advice program; and other CADTH products, services, and initiatives. These approaches are supported by attention to equity and the inclusion of diverse perspectives in CADTH’s patient engagement initiatives, in accessible publishing practices, and in tracking outcomes related to equity across CADTH’s products and services.

**Topic Identification and Scoping**

The preliminary step in an HTA is topic identification and project scoping, to determine the appropriate nature and scope of an HTA to meet end-user and health system needs. By embedding equity considerations into topic identification and scoping, HTAs can focus on how emerging technologies may intersect with health inequities from project initiation. Equity considerations throughout the processes of HTA can build on equity-focused knowledge and information identified during these stages.

CADTH considers equity during topic identification by asking whether an intervention or health technology can contribute to addressing or exacerbating inequities in health care access and outcomes. CADTH uses the ECHTA to identify priority topics for CADTH’s Horizon Scan products and to inform decisions about the identification and prioritization of HTA topics. The ECHTA was chosen for these purposes due to its pragmatic organization, following each step of the HTA process in order. Further, the PROGRESS-Plus framework provides an evidence-based framework to identify socially stratifying factors that can contribute to health inequities. PROGRESS-Plus is an acronym referring to Place of residence, Race/ethnicity/culture/language, Occupation, Gender/sex, Religion, Education, Socioeconomic status, and Social capital, as well as additional personal, relational, and time-dependent features. The list is consulted during scoping to identify which factors are most important to consider for a particular health intervention and to plan for how they will be addressed in the methods of the review. It is used to help identify who might be at risk for the introduction or exacerbation of health inequities related to the impacts of the intervention being scoped.

CADTH continues to pilot the relevant domains of the ECHTA during the scoping process. Employing this framework, the topic selection for CADTH’s 2024 Health Technology Watch List centred on the equity-deserving groups of children and youth with medical complexities. By scoping this Watch List in a way that is attentive to equity considerations, equity will be centred throughout the project.

**Literature Searches and Information Retrieval**

CADTH’s HTAs and evidence reports are facilitated by literature searches to gather the available research and information about the topic or health technology being assessed. Equity-deserving populations and considerations are not always well represented in mainstream biomedical evidence sources. CADTH adjusts for this evidence gap by selecting appropriate databases and grey literature sources; searching these sources in a systematic and unbiased way that includes relevant terminology regarding equity considerations and populations; and facilitating access to evidence, especially when it is behind paywalls or is proprietary.
Further, CADTH reviews emerging information technology systems to confirm they are fair, accountable, secure, transparent, and relevant, to ensure conclusions from these tools do not ignore relevant communities or magnify inequities.

CADTH’s work on Indigenous Knowledges has shaped learning and practices about equity in information retrieval, and found that published literature has limitations as an accurate and complete source of Indigenous Knowledges. Indigenous Knowledges are held in communities, through teaching, mentorship, oral histories, and lived experiences. CADTH continues to explore questions about who has the right to access sacred Knowledges, and when and how these are shared. This is supported by CADTH’s Indigenous relations and engagement strategy to build authentic and equitable relationships that will help to incorporate Indigenous health information in a culturally safe and respectful manner.

Assessments of Health Technologies
CADTH has further attended to equity and equity-deserving groups in its methodologies and approaches to reviewing relevant evidence to assess emerging health technologies. Use of the ECHTA’s evaluation phase criteria has enabled a focus on equity considerations in outcome measures, data collection and analysis, contextual considerations, and stakeholder involvement. Equity considerations in CADTH’s assessments are further guided by the principles outlined by the Campbell and Cochrane Equity Methods Group. The Campbell and Cochrane Equity Methods Group endorses PROGRESS-Plus, which is initially used during scoping and carried through in the methods of the review. Outcomes that are important to populations who experience health inequity are also selected based on Campbell and Cochrane guidance and ECHTA criteria.

Examinations of equity considerations have been embedded into several technology reviews at CADTH to determine the dimensions of equity that are relevant to the decision problem, guided in part by PROGRESS-Plus factors and ECHTA prompts. Relevant groups are also engaged early to inform the project protocol. Together, these tools and principles help guide the application of research methodologies or approaches to investigate how health technologies intersect with health equity, and how health technologies have the potential to ameliorate, produce, or exacerbate health inequities.

CADTH’s Complex Pharmaceutical Reimbursement Reviews include a report on ethical and equity considerations. These reports leverage both the ECHTA and EUnetHTA Core Model for HTA to examine the ethical and equity implications that arise in complex pharmaceutical products, such as CAR T-cell therapies for hematological cancers or first-in-class drugs for rare diseases. The reports focus on equity considerations by examining:

- how and where inequities may arise in access to current treatment, care, and outcomes for the target population
- how the evidence used to support the therapy may be biased against or not account for equity-deserving groups or their interests
- how inequities may arise in the use of the therapy under review for patients, caregivers, and providers
• how the implementation of the therapy under review may address, create, or reinforce health system inequities.

These reports help provide contextual information about ethical and equity implications that are inherent in the introduction of novel therapeutic options, as a component of CADTH’s pharmaceutical Reimbursement Reviews. These are used to support decision-making by CADTH expert committees who provide recommendations to publicly funded drug programs, and by the funders themselves.

Examinations of equity considerations have also been embedded into CADTH’s reviews of qualitative and quantitative evidence on peer support programs for youth mental health, and interventions to alleviate emergency department overcrowding. In addition, CADTH’s reviews of quantitative clinical evidence have incorporated equity considerations by including outcomes that are important to equity-deserving populations, and expanding eligibility criteria to include the study designs most likely to capture evidence that includes equity-deserving groups (e.g., nonrandomized studies). Subgroup analyses are planned across 1 or more PROGRESS-Plus factors. In the final reports, CADTH has commented on the availability of data to inform the impact of the intervention(s) on equity (i.e., potential to increase or reduce inequities) in the available literature.

Equity considerations have also been included in CADTH’s qualitative evidence reviews, including those examining exercise interventions and experiences of emergency department overcrowding. These reports have also adopted PROGRESS-Plus and ECHTA tools as points of reflection to understand, engage with, and articulate equity considerations related to patients’, families’, and health care providers’ experiences in accessing, offering, using, or benefiting from the technology or intervention under review, while paying attention to contextual and social considerations that may shape and contribute to potential inequities. Acknowledging that health is not distributed equally, these approaches help reveal and clarify how and why technology uptake may lead to different, unequal, and unintended consequences across populations.

**Health Economic Evaluation**

Health economic evaluation allows for the consideration of different populations and subgroups by using economic models. Economic models retrieve information from several sources — including clinical trials — to take populations beyond those studied into consideration, which can allow for a better understanding of the most affected or underserved populations. CADTH seeks to identify these populations when initiating projects to ensure they are effectively captured within the modelling exercise. Results for these groups are reported separately to highlight the specific impacts.

Aspects that are important to individuals (e.g., accessibility to care, acceptability of treatment, and lost productivity) may be difficult to capture within clinical trials. Some of these aspects have been included in past economic evaluations. CADTH is broadening the considerations included in economic evaluations to ensure the inclusion of aspects of relevance to individuals, especially in cases where the technology is likely to have an impact on societal considerations (e.g., conditions in which there are unmet needs, or pediatric conditions). They will be captured within CADTH’s economic evaluations where appropriate and will be reported separately to highlight their impact.
Scientific Advice

CADTH’s Early Scientific Advice program offers industry an opportunity to discuss pivotal trial designs and plans to generate real-world evidence with CADTH. This early dialogue can help increase the relevance of the evidence package for HTA in a Canadian setting, and it is an important occasion for CADTH and industry to engage in early discussions about study designs that include equity and access considerations.

CADTH commonly advises on relevant subsets of patients within the target population that may be underrepresented in clinical trials or real-world evidence generation plans. Mitigation strategies are discussed to improve the representation of equity-deserving populations based on several variables, including age, sex, race or ethnicity, place of residence, socioeconomic status, and disease-related factors, depending on the context of the condition. Access and implementation considerations are raised so that planning can start early to optimize equitable access to new medicines in Canada.

Patient Engagement

Patient engagement is central to including diverse perspectives in HTA, and CADTH engages in robust patient engagement processes throughout the HTA life cycle. Every year, patient associations provide input to CADTH’s 60 or more Reimbursement Reviews. Most commonly, this input is used to explore how important patient outcomes are reflected in the clinical trial outcomes, which is 1 of the criteria included in the ECHTA. CADTH’s expert review committees reflect on how clinical and economic evidence addresses patients’ needs, as explained by the patient associations.

However, input collected by patient associations with limited time and resources often does not explicitly include the voices of Black people, Indigenous people, or other people of colour; people living with low income and poverty; those living in rural and remote communities; adolescents and young adults; or members of the 2SLGBTQ+ community. The Living With Type 2 Diabetes report, co-authored by CADTH, Diabetes Canada, and Patient Commando, explored this tension, in addition to identifying insights from the published literature on equity considerations in type 2 diabetes and consolidating past input to identify common treatment priorities and experiences.

Increasingly, CADTH is involving individuals with lived experience in our work. CADTH uses 17 different approaches to find contributors and partners. This includes asking those who are interested about their connection to the topic, how their personal or professional experiences and knowledge might inform our work, and anything they need to make participation easier. Thoughtfully selecting a range of individuals from different regions of Canada, with different backgrounds and different experiences, and prioritizing those who have self-identified as belonging to an equity-deserving group, has enabled us to more fully appreciate how health care is experienced by different communities.

Publishing

CADTH’s reports and recommendations are publicly available on the CADTH website and published in the Canadian Journal of Health Technologies.
CADTH’s reports and recommendations are compliant with Accessibility for Ontarians with Disabilities Act (AODA) guidelines,33 which state that everyone in Ontario should benefit from accessible services, programs, spaces, and employment. In Ontario, all web content must comply with AODA and Web Content Accessibility Guidelines standards to ensure equitable access to information and improve usability of web content for people who are blind or have low vision.

The CADTH Style Guide34 includes a chapter on inclusive and respectful terminology, with sections on ethnicity and race, Indigenous terminology, sexual orientation and gender identity, and disabilities and diseases. CADTH offers information sessions to staff to ensure the language used in our reports and with each other is inclusive, nonbiased, and respectful.

Tracking Results
As part of the organization’s overall performance measurement strategy, CADTH developed a set of indicators to assess our progress implementing the objectives of the 2022–2025 Strategic Plan. Two of the indicators are related to equity considerations, specifically:

- percent of evidence reviews that identify areas for further research (gaps) related to equity considerations
- percent of products that include a recommendation or conclusion identifying 1 or more ways to reduce inequity (or improve equity).

CADTH has now established a baseline measurement for both and will continue to monitor these indicators for the duration of the Strategic Plan.

Future Work
The path of advancing health equity through HTA has been described as a journey and not a destination,9 and CADTH’s initiatives to incorporate health equity continue to evolve. This evolution involves the ongoing trialling and adaptation of tools, methodologies, processes, and sources to address health inequities through the processes of HTA. To support this, there is a need for a more robust evidence base on health inequities to deliver the greatest value to patients, clinicians, and decision-makers.

CADTH’s ongoing focus on IDEA throughout the organization is further supported through a declaration of CADTH’s commitment to IDEA. This is being developed through extensive staff, leadership, board, and external partner engagement. This declaration will provide the foundation of an integrated approach to IDEA across CADTH to ensure our collective impact is meaningful, sustainable, and progressive.

Future work at CADTH will continue to grow capacity and knowledge to employ and appraise the methodologies and approaches by which considerations of health equity can be incorporated throughout CADTH’s work. This will require a thoughtful and coordinated approach to deliver the most equitable and impactful health systems across Canada.
References


