

Citizen Brief

Enhancing Equitable Access to Assistive Technologies in Canada

5 May 2017



EVIDENCE >> INSIGHT >> ACTION

The McMaster Health Forum

For concerned citizens and influential thinkers and doers, the McMaster Health Forum strives to be a leading hub for improving health outcomes through collective problem solving. Operating at the regional/provincial level and at national levels, the Forum harnesses information, convenes stakeholders and prepares action-oriented leaders to meet pressing health issues creatively. The Forum acts as an agent of change by empowering stakeholders to set agendas, take well-considered actions and communicate the rationale for actions effectively.

About citizen panels

A citizen panel is an innovative way to seek public input on high-priority issues. Each panel brings together 10-16 citizens from all walks of life. Panel members share their ideas and experiences on an issue, and learn from research evidence and from the views of others. The discussions of a citizen panel can reveal new understandings about an issue and spark insights about how it should be addressed.

About this brief

This brief was produced by the McMaster Health Forum to serve as the basis for discussions by the citizen panel on how to enhance equitable access to assistive technologies in Canada.

This brief includes information on this topic, including what is known about:

- the underlying problem;
- three possible elements of a comprehensive approach to address the problem; and
- potential barriers and facilitators to implement these elements.

This brief does not contain recommendations, which would have required the authors to make judgments based on their personal values and preferences.

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Key Messages

What's the problem?

- The main factors contributing to the challenge of enhancing equitable access to assistive technologies in Canada, include:
 - the many different definitions for assistive technologies can lead to confusion about what they are and what is covered;
 - the need for assistive technologies is increasing;
 - access to assistive technologies is inconsistent, which in some cases results in unmet needs; and
 - system-level factors can make it complicated to access assistive technologies.

What do we know about elements of a potentially comprehensive approach for addressing the problem?

- **Element 1: Informing citizens, caregivers and healthcare providers to help them make decisions about which assistive technologies they need and how to access them**
 - This could include: 1) providing information or education from points of contact in the community and/or through reliable and trusted online sources; 2) including questions about the need for assistive technologies in decision aids that support care planning and purchasing; and 3) providing system navigators for those with complex needs.
- **Element 2: Helping citizens get the most out of publicly funded programs**
 - This could include: 1) providing public funding based on need for different types of assistive technologies; 2) streamlining existing government approaches that provide access to assistive technologies; and 3) creating transparent and flexible criteria to define what technologies are covered.
- **Element 3: Supporting citizens to access needed assistive technologies that are not covered by public programs**
 - This could include: 1) using methods of cost-sharing; 2) increasing supports for people with disabilities to participate in the workforce; and 3) streamlining regulatory approval processes for technologies to be brought to markets across the country.

What implementation considerations need to be kept in mind?

- Barriers to implementing these elements might include: 1) a mismatch between expectations of what should be publicly financed and the realities of government budgets; 2) increased demands placed on healthcare providers (e.g., for supporting system navigation); and 3) the need for significant collaboration between federal and provincial-level policymakers, which can be difficult to achieve.
- Windows of opportunity for implementing these elements might include: 1) demographic shifts in the population making system change necessary; 2) similar priorities among provincial and federal policymakers for health systems in the country; and 3) resource constraints that often lead to innovative approaches to healthcare problems.

Box 1: What are assistive technologies?

Assistive technologies are difficult to define as there are many terms used in the field, such as assistive device, assistive product, or assistive technology device. Also, there is no standard set of terms either internationally or nationally.

For the purposes of the brief, assistive technologies are defined as items that are used to maintain or improve the functioning of individuals of any age.⁽⁴⁾ Assistive technology services refer to the services associated with providing the items.

Assistive technologies can be available commercially as ‘off-the-shelf’ products, which are readily available in stores (e.g., handrails, shower stools and portable computers). In contrast, some assistive technologies require personalized adjustments (e.g., height-adjustable two-wheeled walkers), while others are customized and designed specifically to meet the needs of the individual (e.g., prostheses, orthoses and wheelchairs).

Common uses for assistive technologies include (but are not limited to):

- personal use in daily living and self care;
- personal indoor and outdoor mobility and transportation;
- communication (e.g., hearing, seeing, speaking and writing);
- education;
- employment;
- culture, recreation and sport; and
- practice of religion and spirituality.⁽⁸⁾

The need for assistive technologies is closely linked to both aging and living with a disability. Also, many older adults without disability benefit from assistive technologies to help them remain at home and participate in life (Figure 1).

Figure 1: Who needs assistive technology? (figure reproduced with permission)(15)



Who needs assistive technology?

THE PEOPLE WHO MOST NEED ASSISTIVE TECHNOLOGY INCLUDE:



older people



people with disability



people with noncommunicable diseases



people with mental health conditions including dementia and autism



people with gradual functional decline

ASSISTIVE PRODUCTS ARE ESSENTIAL TOOLS TO:



compensate for an impairment/ a loss of intrinsic capacity



reduce the consequences of gradual functional decline



help minimize the need for caregivers



prevent primary and secondary health conditions



lower health and welfare costs

ASSISTIVE PRODUCTS ARE OFTEN THE FIRST STEP TOWARDS:



getting out of bed and out of one's house



accessing education, work and employment



escaping from poverty and hunger



greater mobility, freedom and independence



inclusion and participation



leading a dignified life

Questions for the citizen panel

>> We want to hear your views about a problem, three elements of a potentially comprehensive approach to addressing it, and how to address barriers to moving forward.

This brief was prepared to stimulate discussion during the citizen panel. The views and experiences of citizens can make a significant contribution to finding the best ways to meet their needs. More specifically, the panel will provide an opportunity to explore the questions outlined in Box 2. Although we will be looking for common ground during these discussions, the goal of the panel is not to reach consensus, but to gather a range of perspectives on this topic. To help you better understand some of the terminology when considering these questions and reading through the brief, we provide a glossary of key terms in Box 3.

Box 2: Questions for citizens

Questions related to the problem

- What has worked well and what has been a challenge in accessing assistive technologies or the services and supports needed to allow their use by you, a family member or someone to whom you provide care?
- What challenges have you encountered in accessing assistive technologies for:
 - older adults;
 - someone living with a disability; and
 - others in need of assistive technologies to improve their quality of life and/or help them live at home or in the community?

Questions related to the elements of a potentially comprehensive approach to address the problem

General questions to consider (with more specific questions included later for each element)

- What has helped you or someone to whom you provide care to access assistive technologies in the past?
- What would make access to assistive technologies in Canada equitable?
- What would help you to identify the types of assistive technologies you might need?
- Do you think that public coverage for some types of assistive technologies should be increased? If so, for which types of products?
- Do you think that some groups should receive greater access to assistive technologies? Which groups and for which types of products?
- Do you think the private sector (e.g., insurance companies) or the voluntary sector (e.g., charities) should help enhance equitable access to assistive technologies for those who need them? If so, what role do you think they should play?
- How might the private and voluntary sectors work alongside the public sector to enhance access?
- How much choice should people have in accessing assistive technologies?

Question related to implementation considerations

- What are the main challenges to achieving these expectations?

Box 3: Glossary

Caregiver

An individual who is providing unpaid and ongoing care or social support to a family member, neighbour or friend who is in need as a result of physical, cognitive or mental health conditions.(1)

Chronic health condition

A health issue that requires continuous management over a period of time (e.g., arthritis, asthma, cancer, depression, dementia, diabetes and heart disease).(6)

Disability

A broad term used to refer to impairment (a body function or structure problem), activity limitation (difficulties in performing a task) and/or participation restriction (problem with involvement in life activities).(7)

Health equity

“Refers to fair opportunity for everyone to attain their full health potential regardless of demographic, social, economic or geographic strata.”(10)

Home and community care

Services to help people who are receiving “care at home, rather than in a hospital or long-term care facility, and to live as independently as possible in the community. Home and community care is delivered by regulated health care professionals (e.g., nurses), non-regulated workers, volunteers, friends and family caregivers.”(11)

Procurement

Refers to the process of purchasing goods or services, which includes choosing vendors, terms of payment, and negotiating contracts.

Public financing

Financial resources provided by the provincial/territorial/federal government and related bodies (such as health regions) for products and services.

System navigator

System navigators (sometimes referred to as patient navigators) act as guides to help connect people in need of healthcare-related supports (e.g., assistive technologies) with the right healthcare providers, programs and services, as well as other resources.(12)



Assistive technologies “enable people to live healthy, productive, independent and dignified lives; to participate in education, the labour market and civic life.”(2)

The context: Why is enhancing equitable access to assistive technologies in Canada a priority?

Many provincial and territorial health systems in Canada are focused on the goals of enhancing access to home and community care, and supporting older adults to stay at home for as long as possible. Assistive technologies are a key part of achieving these goals, as they promote active and healthy aging, independent living and aging-in-place. Yet programs that provide access to assistive technologies vary greatly. Also, the approach to delivery is not well coordinated.

The importance of providing equitable access to assistive technologies is likely to increase given that:

- 1) the number of older adults is growing and is expected to double within the next two decades;(16; 17)
- 2) while older adults today are living longer than previous generations, as people age they are more likely to have health problems (e.g., disability or chronic diseases);(16; 18-20)
- 3) the combination of the aging population and number of people who have a disability will increase the burden of chronic disease;(16) and

4) almost a quarter of Canadians (23%) are playing a role in providing care for family and friends with a long-term illness, disability or aging-related needs.(21; 22)

Approximately 93% of older adults in Canada are living at home.(16) With care increasingly being provided in the community, caregivers will need assistive technologies both to help them to provide needed care and to keep their roles manageable.

Also, access to assistive technologies is not always equitable because those who need them are not always able to access them. A number of factors contribute to this challenge, including:

- 1) differences across the country for the types of assistive technologies that are approved for funding, the amount of funding available, co-payment requirements and the eligibility criteria, which create gaps between need and access;
- 2) the assistive technologies that are covered may not be the most suitable or up-to-date technologies that can be used to meet the unique needs of individuals (e.g., magnifiers for vision loss instead of apps on a tablet); and
- 3) despite the increased number of assistive technologies available, procurement policies have lagged in responding to innovation and growing user demand.(23; 24)

Enhancing equitable access to assistive technologies in Canada therefore provides an opportunity to do a better job of helping older adults age in place (Figure 2). These opportunities include:

- informing citizens, caregivers and healthcare providers to help them make decisions about which assistive technologies they need and how to access them;
- helping citizens get the most out of publicly funded programs; and
- supporting citizens to access needed assistive technologies that are not covered by public programs.

Box 4: Key features of health systems in Canada

Key features of health systems

- The responsibility for health systems falls primarily to the provinces and territories, with broad rules set by the federal government.(3)
- Medically necessary care provided in hospitals or by a physician is fully paid for as part of each publicly funded provincial/territorial health system.(3)
- Other healthcare providers (e.g., nurses, physiotherapists, occupational therapists) are typically not paid for by provincial/territorial health systems, unless their care is provided in a hospital or long-term care setting. Public coverage outside of these settings varies by province and territory.
- Other aspects of healthcare (e.g., assistive technology and prescription drug coverage) and community services (e.g., home care and long-term care homes) may be partly government funded, with the remaining portion of the costs paid through private insurance plans and/or out-of-pocket.(9)
- Healthcare is increasingly organized by region within provinces and territories. Planning and funding of healthcare is the responsibility of the regions.(3)

Features of how assistive technologies enter Canadian markets

- Some assistive technologies (e.g., prosthetics and wheelchairs) are classified as medical devices and are treated similar to prescription drugs. This requires regulatory approval at the federal level through the Therapeutic Products Directorate of Health Canada's Health Products and Food Branch in order to be offered for sale in Canada.(13; 14)
- Once an assistive technology has received approval for sale in Canada and the necessary provincial/territorial approvals, the manufacturer/vendor/distributor must then apply separately to each province and territory's assistive technologies program to be included on the list of publicly financed devices.
- Other assistive technologies (e.g., grab bars and shower stools) are readily available in the marketplace and pass through the same regulatory processes as other goods (e.g., electronics and children's toys).

Features most relevant to home and community care

- The extent of coverage varies by province/territory for home and community care. The coordination of services is often being conducted at the regional level either by or in collaboration with the regional authorities responsible for planning and funding healthcare.
- A mix of not-for-profit, for-profit and public organizations provide home and community care to residents, and programs include:
 - 1) professional services (e.g., nursing care and occupational therapy);
 - 2) personal support services (e.g., daily living and self care);
 - 3) homemaking services (e.g., housecleaning); and
 - 4) end-of-life care (e.g., respite care).(9)



The World Health Organization estimates that there are more than one billion people worldwide who are in need of assistive technologies.(2; 5)

The problem: Why is enhancing equitable access to assistive technologies in Canada necessary but challenging?

We identified four factors that contribute to the challenge of enhancing equitable access to assistive technologies in Canada. These are outlined in Figure 2 and described in the sections that follow it.

Figure 2. Factors contributing to the challenge of enhancing equitable access to assistive technologies



The many different definitions for assistive technologies can lead to confusion about what they are and what is covered

There is a lack of agreement both in Canada and internationally on terms and definitions for assistive technologies. Likewise, federal, provincial and territorial governments use different terms to refer to assistive technologies. Governments also often use very narrow definitions for their publicly funded programs to be clear about what is and is not eligible for public coverage.

For example, the Alberta Aids to Daily Living program refers to basic equipment and supplies to support persons with long-term disability, chronic illness or terminal illness, and funds up to 75% of the costs.⁽²⁵⁾ In contrast, the Ontario Ministry of Health and Long-Term Care's Assistive Devices Program uses the term assistive devices that support residents with long-term physical disabilities. This program funds up to 75% of the cost of devices that meet basic needs.⁽²⁶⁾ In New Brunswick, a mix of Health Services programs offered through the Department of Social Development provides full coverage for assistive technologies for eligible persons with disabilities. The programs are named based on the

device type covered such as the Wheelchair/Seating program or Hearing Aid program, as well as one for Convalescent and Rehabilitation items (e.g., for walkers and grab bars).(27)

The variations in the terms used to refer to assistive technologies by federal, provincial and territorial programs can be confusing for citizens, caregivers and healthcare providers. Identifying what technologies are covered and what the eligibility criteria are for receiving coverage can be challenging. This can be especially difficult when needing to access and navigate multiple programs in different health systems to receive the needed technologies.

Keeping with the example of Ontario, there are a variety of programs that offer assistive technologies, including the Assistive Devices Program, some Community Care Access Centres, Workplace Safety and Insurance Board, private insurance, and non-profit and charitable organizations. Eligibility criteria vary by program with additional funding available for low-income individuals.(28; 29) These multiple access points for assistive technologies each have their own definitions for assistive technologies and criteria for technologies to be covered. This can make accessing and coordinating between programs challenging, particularly for older adults who may have a disability, and/or those who need technologies from multiple programs/providers.

The need for assistive technologies is increasing

The need for assistive technologies is increasing and is likely to continue to grow due to at least four related reasons:

- an aging population;
- increases in the number of people who have a disability;
- increases in the burden of chronic disease; and
- the burden placed on caregivers.

These reasons are depicted in Figure 3 below.

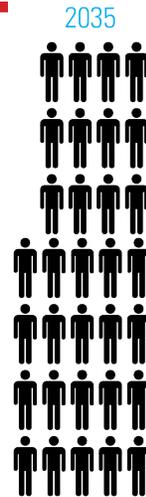
Figure 3: Demographic and social changes are increasing the need for assistive technologies*

The population is changing...

For the first time, there are more persons aged 65 years + in Canada than 0-14

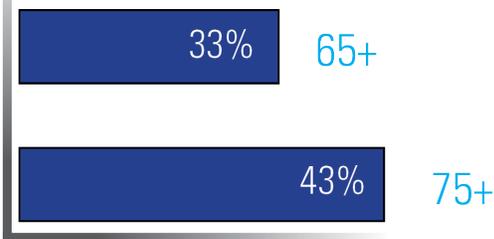


The number of Canadians aged 65+ is expected to double in the next two decades



...and in need of more assistive technology

Individuals reporting some form of disability...



81% ...of whom report using some form of assistive technology

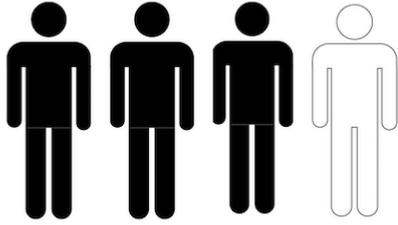


30% of those aged between 45-74 report experiencing an unmet need for assistive technology...

44% ... this statistic increased to 44% among those reporting severe disability

An aging population may result in...

...a rise in chronic disease



74% of Canadians aged 65 + have 1 or more chronic conditions

... and an increased need for caregivers equipped with assistive technologies



93% of older adults are living at home

Sources: 16; 18; 19; 30; 31

Access to assistive technologies is inconsistent, which in some cases results in unmet needs

The World Health Organization identified 50 priority assistive technologies based on need and potential impact on an individual's life.(15) The 50 priority assistive technologies include “hearing aids, wheelchairs, communication aids, spectacles, artificial limbs, pill organizers, memory aids and other essential items for many older people and people with disabilities to be able to live a healthy, productive and dignified life.”(2)

It is estimated that there are more than one billion people around the world requiring assistive technologies, and the majority of those in need are older adults or those living with a disability.(2; 5) By 2050, the number of individuals requiring an assistive technology is predicted to double to two billion people.(5; 15) However, worldwide, it is anticipated that only 10% of those in need of assistive technologies have access to them.(15)

While federal and provincial/territorial government programs offer supports to adults with disabilities, funding and services for them vary across Canada. These gaps inevitably lead to unmet needs (at least from the programs we surveyed). For example:

- none of the 50 priority assistive technologies are available across all federal, provincial and territorial programs;
- several do not receive any public funding (e.g., time management products, portable travel aids, adaptive tricycles and talking/touch-enabled watches); and
- others receive public funding, but only in a small number of provinces and territories (e.g., alarm signalers with light, sound or vibration, deaf-blind communicators, gesture-to-voice technology, global positioning system (GPS) locators, pill organizers, video communication devices).

The most commonly funded and serviced technologies are designed to address mobility issues, such as wheelchairs, orthoses and prostheses, with patchy coverage for communication, vision and hearing issues.

A closer look at the list of 50 priority technologies also reveals important gaps. Most notably, few of the listed items are designed to address cognitive or mental health concerns. There is also minimal coverage for these technologies across Canada, even though cognitive changes (e.g., related to dementia) or mental health concerns (e.g., depression, social isolation and loneliness) often occur as people age.

System-level factors can make it complicated to access assistive technologies

A number of challenges in the health system further complicate efforts to access assistive technologies. In Table 1, we describe the challenges as they relate to health system governance, financial and delivery arrangements.

Table 1: Main system-level challenges related to accessing assistive technologies

Health system arrangements	Main challenges
Governance arrangements	<ul style="list-style-type: none"> • There is no clear leadership for the provision of assistive technologies across the country. This results in variations in eligibility criteria across provinces and territories for what is provided and to whom it is provided. • Manufacturers/vendors/distributors interested in developing and introducing new assistive technologies must apply separately to each province and territory, but each has different approval processes.
Financial arrangements	<ul style="list-style-type: none"> • Funding and services for assistive technologies are provided through a mix of sources, including: <ul style="list-style-type: none"> ○ federal, provincial and territorial government programs; ○ non-profit and charity programs (e.g., Muscular Dystrophy Canada, Multiple Sclerosis Society of Canada, March of Dimes Canada); ○ private insurance (e.g., extended health insurance, disability insurance and auto insurance); ○ public insurance; and ○ out-of-pocket payments. • This array of sources complicates the process of accessing assistive technologies, and poses financial barriers to those who are in need but cannot afford the costs associated with accessing them.
Delivery arrangements	<ul style="list-style-type: none"> • Assistive technologies are delivered through a patchwork of highly fragmented, overlapping and poorly coordinated programs. • The definitions of assistive technologies used by programs often determine what is covered. • The patchwork of programs within provinces and territories creates challenges in system navigation for people in need of assistive technologies, their caregivers and healthcare providers. • Many experience difficulties in accessing services associated with assistive technologies due to lack of funding and/or inequitable availability of services within provinces and territories (e.g., those living in rural and remote communities).



We have selected three elements of an approach to address the problem for which we are seeking public input.

Elements of an approach to address the problem

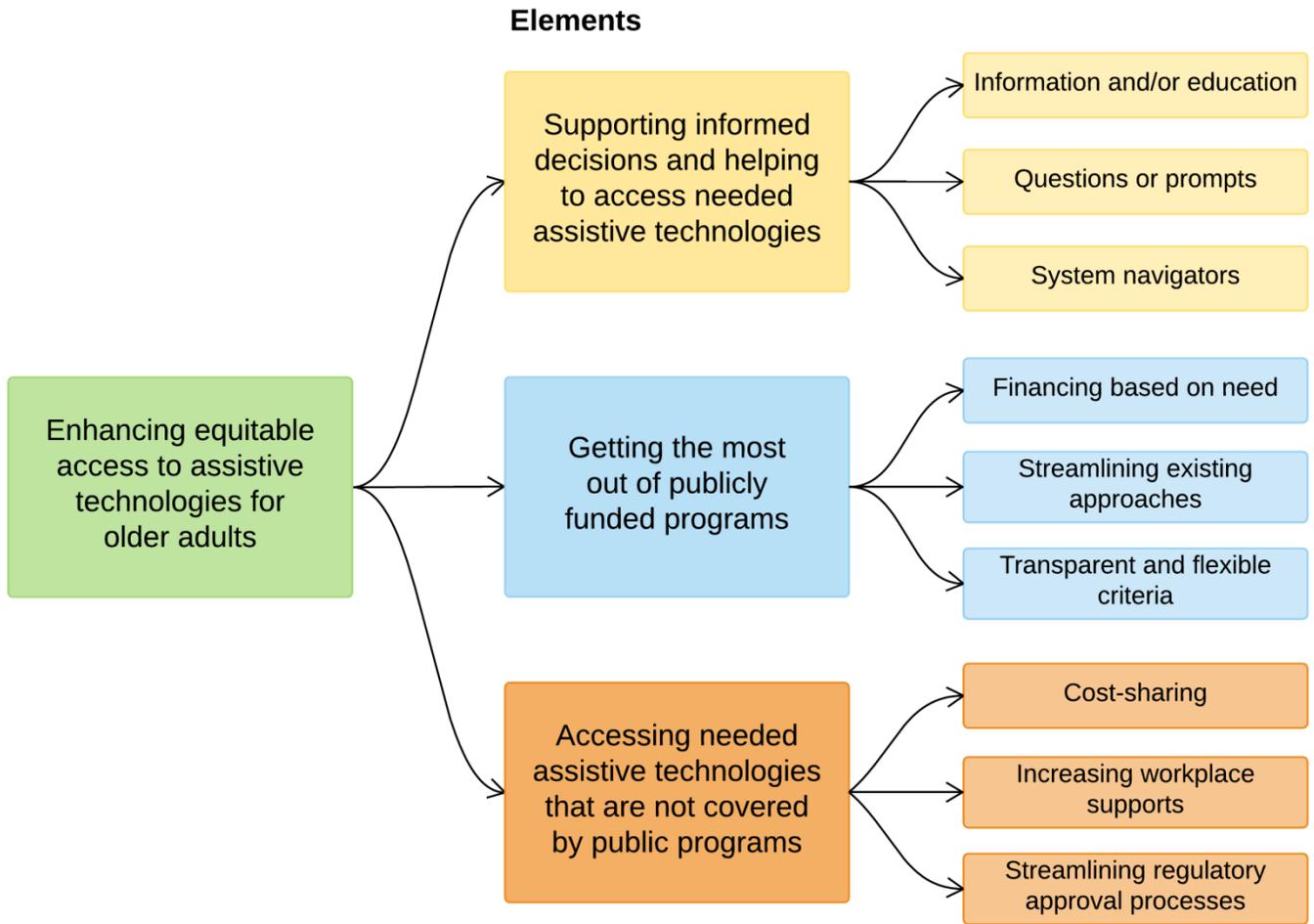
>> To promote discussion about the pros and cons of potential solutions, we have selected three elements of an approach to enhancing equitable access to assistive technologies in Canada

Many approaches could be selected as a starting point for discussion. We selected the three elements of a potentially comprehensive approach for which we are seeking public input (see Figure 4):

- 1) informing citizens, caregivers and healthcare providers to help them make decisions about which assistive technologies they need and how to access them;
- 2) helping citizens get the most out of publicly funded programs; and
- 3) supporting citizens to access needed assistive technologies that are not covered by public programs.

These elements should not be considered separately. Instead, each should be considered as contributing to a potentially comprehensive approach to addressing the problem. New elements could also emerge during the discussions.

Figure 4: Areas of focus for enhancing equitable access to assistive technologies in Canada



Element 1 – Informing citizens, caregivers and healthcare providers to help them make decisions about which assistive technologies they need and how to access them

Overview

Those in need of assistive technologies and/or those who provide care to those in need of assistive technologies, may have difficulty navigating the health system and actively participating in decision-making about their own care and the technologies they need. This element focuses on the use of decision-making aids and system navigators to help those in need of assistive technologies, caregivers or healthcare providers. This could include:

- providing information or education through:
 - logical community points of contact (e.g., family physician or nurse, home- and community-care coordinators or other healthcare providers), and/or
 - a reliable and trusted online source usable by those who could make direct use of assistive technologies (including families and caregivers);
- including questions/prompts about the need for assistive technologies in decision aids that support care planning and purchasing of assistive technologies (either through government or private sources); and
- providing system navigators for those with complex needs, and equipping the navigators with the knowledge and skills needed to identify and support access to assistive technologies for those who could benefit from them.

Evidence to consider

We found several systematic reviews (i.e., a synthesis of results from all the studies addressing a specific topic) that provide evidence about these sub-elements. We summarize these findings in Table 2. None of these reviews were focused specifically on assistive technologies. However, by examining the effectiveness of decision aids, navigation and patient or caregiver involvement in decision-making, these reviews offer insights about these approaches.

Questions to consider

- What would be helpful for you to identify and access needed assistive technologies?
- How much choice should people have in accessing assistive technologies?
 - Should they have to select from a list of pre-approved basic items or have free choice in the specific product, and pay the difference?
 - Should they have free choice of vendors or should people have to select from a list of pre-approved vendors?

Table 2: Summary of evidence about element 1

Area of focus	Key findings
<p>Providing information or education from points of contact in the community and/or through reliable and trusted online sources</p>	<ul style="list-style-type: none"> • Providing education to patients to support decision-making was found to increase knowledge and reduce levels of uncertainty among patients, but had no effect on patients’ final decision-making.(32-34) • Interventions that support shared decision-making among patients, caregivers and providers had positive effects on participant knowledge, participation, decision conflict and self-efficacy. However, no significant effect has been found for improving adherence to treatments, anxiety, treatment preferences, intentions or uptake of screening or treatment.(32) • Participatory models of education (e.g., through face-to-face interaction) have been found to improve health-related behaviours and patient self-efficacy.(34) • Providing education has been found to have a larger impact on disadvantaged groups as compared to those with higher health literacy and socio-economic status.(34) • Budget limitations have been identified as a key barrier to the implementation of community-engagement initiatives.(35)
<p>Decision aids that support care planning and purchasing</p>	<ul style="list-style-type: none"> • The use of decision aids and the provision of education to involve patients and caregivers in the delivery of their care was generally found to have positive results (e.g., improved knowledge, reduced levels of anxiety and increased adherence to treatments).(32-34; 36)
<p>Providing system navigators for those with complex needs</p>	<ul style="list-style-type: none"> • There is limited evidence available on the use of system navigators, however, their use for older adults with complex conditions appears positive.(37) • There is mixed evidence about the potential for decision-support interventions, including health coaching and telephone outreach, to generate savings.(38)

Element 2 – Helping citizens get the most out of publicly funded programs

Overview

This element focuses on developing and using criteria for publicly funded assistive technologies. This will require defining those technologies that should be provided and paid for through public programs. To support informed judgments about this element, we present the evidence related to processes for prioritizing and making decisions about which technologies will be eligible for public coverage and for which individuals.

Specific components of this element might include:

- Providing public funding based on need for different types of assistive technologies (e.g., for those that improve physical and mental health, mobility, social connectedness, safety, leisure and activities of daily living), which could be done through:
 - giving funding based on need, and/or
 - through controlled budgets that allow the individual to buy the products they need;
- streamlining existing government approaches that provide access to assistive technologies (e.g., tax deductions); and
- establishing transparent and flexible criteria to define what technologies are covered.

Evidence to consider

We did not identify systematic reviews directly relevant to using these types of activities for assistive technologies. However, we did identify several systematic reviews focused on the ways in which medicines are reviewed, procured and paid. We summarize these reviews in Table 3.

Questions to consider

- Do you think that public coverage for some types of assistive technologies should be increased? If so, for which types of products?
- What should the criteria for access be based on?
 - Should higher priority be given to some criteria over others?
 - Should the criteria for access be based on impairment and limitation types, age, capability to improve daily function or participation, or other factors?
- Do you think that some groups should receive greater access to assistive technologies?
 - If so, for which groups?

Table 3: Summary of evidence about element 2

Area of focus	Key findings
<p>Providing public funding based on need for different types of assistive technologies</p>	<ul style="list-style-type: none"> • The following strategies were effective at expanding public health insurance coverage for select services (or products) and for select populations: <ul style="list-style-type: none"> ○ modifying eligibility criteria by either increasing the income level required to receive health insurance, or by expanding access for priority populations; ○ using targeted awareness campaigns; ○ offering subsidies to low-income people; and ○ modifying enrolment approaches by simplifying procedures or integrating enrolment across social services.(39) • Cash payments, vouchers and conditional cash transfers have been found to be effective for increasing the use of specific services.(40) • Providing insurance for all services increases utilization and population health, but it also has substantial effects on the use of preventive services, self-reported health status, and mortality from injury or disease.(41)
<p>Establishing transparent and flexible criteria to define what technologies are covered</p>	<ul style="list-style-type: none"> • Supporting decision-making could involve: <ul style="list-style-type: none"> ○ listing relevant activities and their resource requirements, evaluating the activities and applying the evaluation results to the available budget (this is called program budgeting and marginal analysis);(42) or ○ measuring competing options using explicit criteria that are developed based on values in advance (this is called multi-criteria decision analysis).(42) • The following eight criteria were the most frequently identified criteria that decision-makers use to evaluate options for resource allocation: <ul style="list-style-type: none"> ○ effectiveness of intervention; ○ budgetary impact or affordability; ○ equity or effect on health inequalities; ○ number of people likely to benefit; ○ ability or ease of access to the intervention; ○ cost-effectiveness; ○ quality or uncertainty of available evidence; and ○ ease with which the intervention can be implemented.(43-45)

Element 3 – Supporting citizens to access needed assistive technologies that are not covered by public programs

Overview

This element focuses on using market-based solutions to assist individuals in accessing assistive technologies that they need, but that do not receive public coverage. This element might include:

- using cost-sharing mechanisms, which could involve one or more of:
 - sliding-scale payments with the amount paid through insurance or out-of-pocket determined by an individual's ability to pay,
 - flat-rate user fees, or
 - full private payment (either from insurance coverage or out-of-pocket payment);
- enhancing supports for people with disabilities to participate in the workforce, by enhancing the scope of coverage for assistive technologies through employment-based insurance as well as through non-profit and charity programs; and
- streamlining regulatory approval processes for technologies to be brought to markets across the country.

Evidence to consider

In Table 4, we summarize the evidence to consider during your deliberations. Similar to element 2, medicines are used as an example given a lack of evidence about assistive technologies in this area. Focusing on medicines provides some indication of how individuals may demand and use products because of changes to funding policies. Note that while we found systematic reviews relevant to cost-sharing mechanisms and supports for workplace participation, none were identified about regulatory approval.

Questions to consider

- Do you think the private sector (e.g., insurance companies) or the voluntary sector (e.g., charities) should help enhance equitable access to assistive technologies for those who need them?
 - If so, what role do you think they should play?
- How might the private and voluntary sectors work alongside the public sector to enhance access?
- How much choice should people have in accessing assistive technologies?

- Should they have to select from a list of pre-approved items or have free choice in selecting the technology they need?
- Should they have free choice of vendors or should people have to select from a list of pre-approved vendors?
- What would be the simplest way to:
 - streamline access to assistive technologies; and
 - coordinate cost-sharing when multiple providers and payers are involved (e.g., public funding, non-profit and charity organizations and private insurance)?

Table 4: Summary of evidence about element 3

Area of focus	Key findings
Cost-sharing mechanisms	<ul style="list-style-type: none"> • Most Organisation for Economic Co-operation and Development countries* use: <ul style="list-style-type: none"> ○ some form of cost-sharing (typically co-payments); and ○ a wide variety of adjustments to safeguard citizens from financial burden (e.g., changing the co-payment amount based on income, age and disease burden).(46) • Co-payments can help maximize a health budget, but these savings can come at the expense of reduced drug use for those who are unable to pay more.(46) • Introducing co-payments has resulted in an 11% increase in non-adherence to prescribed medications, and this increased for medications that require daily consumption.(47) • Privatized distribution systems increased the availability of essential drugs.(48)
Enhancing supports for people with disabilities to participate in the workforce	<ul style="list-style-type: none"> • The following factors help to successfully transition individuals to return to work following injury: <ul style="list-style-type: none"> ○ interventions involving a workplace component; ○ provision of care from an interprofessional team; ○ interventions that begin within six weeks of the injury; ○ using psychological interventions as part of a multi-component approach; and ○ actions to stimulate the employee to return to work in rehabilitative interventions.(49; 50) • Those who are younger, have a higher level of education and income, are married, and have positive social support are more likely to return to work after diagnosis and treatment of breast cancer.(51) • Physical fitness level, exhaustion, fatigue, tiredness and presence of other co-morbidities were predictors for returning to work.(51) • Many factors are associated with being less likely to return to work following injury or disease (e.g., older age, high levels of pain or disability, having previously taken sick leave, difficulty performing activities of daily living, and having a job that requires many physical demands).(49)

* Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.

Implementation considerations

It is important to consider what barriers may be faced for the implementation of the proposed elements. These barriers may affect different groups (for example, patients, citizens, healthcare providers), different healthcare organizations or the health system. While potential barriers exist at the levels of patients/citizens, providers, organizations and systems, the biggest likely include:

- a mismatch in expectations between individuals in need of assistive technologies for what should be publicly funded and the realities of government budgets;
- increased demands placed on healthcare providers for supporting informed decision-making and system navigation, which may not be supported by how they currently practice and are paid; and
- significant collaboration between federal- and provincial/territorial-level policymakers, which is often challenging to achieve.



The implementation of each of the three elements could also be influenced by the ability to take advantage of potential windows of opportunity. A window of opportunity could be a recent event that was highly publicized in the media, a crisis, a change in public opinion, or an upcoming election. A window of opportunity can facilitate the implementation of an element.

Examples of potential windows of opportunity

- **An aging population and increases in disability:** Demographic shifts in the population mean that there is a need for assistive technologies to meet the care needs of older adults and their caregivers.
- **Alignment of provincial and territorial health-system policy priorities:** Provincial and territorial health systems in Canada are focusing on enhancing home and community care to help older adults age in place, which could include a focus on enhancing equitable access to assistive technologies.
- **Challenging economic climate:** Difficult economic times lead to resource constraints, which can often support the creation of innovative approaches to healthcare problems.



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Conflict of interest

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Merit review

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