



## Rethinking the Canadian Assistive Technology system: A call for a Human Rights Based Approach to Assistive Technology

Opinion Editorial

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**Abstract:** Assistive technology (e.g. walkers, hearing aids) has been proposed as a strategy to support people with disabilities and growing ageing population. However, the current AT system is underfunded; restricted; unresponsive to the needs of the people it is intended to benefit; and lacks central engagement of its users. This paper aims to identify the root causes behind the inadequate AT system to inform development of sustainable solutions by drawing on the Human Rights Based Approach, a conceptual framework that seeks to understand and address the root causes of systemic problems.

The World Health Organization (WHO) estimates that more than one billion people worldwide require assistive technology.<sup>1</sup> Assistive technology is any product (including devices, equipment, instruments, and software), that is specially designed, produced, or generally available in order to maintain or improve an individual's functioning and independence. Common examples of assistive products are glasses, hearing aids, wheelchairs, communication boards, prosthetics and therapeutic footwear. Assistive technology contributes to the wellbeing of individuals living with disabilities by supporting healthy, productive, and independent lives through assisting their engagement in meaningful activities of choice and/or necessity.

Assistive technology (AT) has been identified by the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) as a basic human rights instrument with an explicit social development dimension,<sup>2</sup> and a necessary facilitator in the achievement of all 17 of the Sustainable Development Goals.<sup>3,4</sup> In order to provide a direct action towards the realization of UNCRPD principles, the World Health Organization (WHO) launched the Global Cooperation on Assistive Technology (GATE) initiative.<sup>5</sup> GATE calls on countries who have ratified UNCRPD to develop national AT systems and policies that best serve AT users.<sup>2</sup>

Although Canada has signed and ratified the UNCRPD in 2010, the Canadian AT system has not kept up with the rapid development and uptake of

assistive technology. The inadequacy of Canada's AT system is evident through inequities in access to AT and the lack of legislation, policies, and programs pertaining to AT.<sup>6</sup> More importantly, the present Canadian AT system is not reflective of society's advances in understanding disability, as outdated notions of disability continue to dominate the current system. Historically, disability has been perceived as an 'abnormality' and those with disabilities have been regarded as 'defective' individuals, incapable of living fulfilling lives, who require medical intervention, charity, and custodial care.<sup>7-9</sup> Despite social advancement in the notion of disability over the past few decades, the aforementioned conceptualization of disability still underlies many of today's policies and practices.<sup>9</sup> This outdated narrative perpetuates the systemic discrimination of people with disabilities.<sup>7,10</sup> The current AT system is no exception.

The prevailing notions of dominant disability discourse persist within the AT system and are evident through:

1. General perception of AT as an intervention tool that aims to reduce dis-function and limitation brought about by disability to attain 'normalcy';<sup>8,10,11</sup>
2. Greater value placed on healthcare professionals' expertise and decision-making authority over AT users' meaningful choice;<sup>9,11</sup>
3. Prioritization of AT value in terms of health outcome over quality of life and user satisfaction.<sup>9,11</sup>

The momentum created by the GATE's initiative's global call for user central redevelopment of AT systems<sup>5</sup> raises the question of how to advance the Canadian AT system to best serve AT users. A possible answer lies in critically examining and re-framing the existing AT system within the Human Rights Based Approach (HRBA)<sup>12</sup> to assistive technology.

The HRBA, a framework based on international human rights standards and operationally directed to promoting and protecting human rights,<sup>12,13</sup> represents a paradigm shift in understanding and conceptualizing disability. The HRBA recognizes



disability as an 'aspect of variation in human characteristics that are inherent to the human condition and argues that all individuals are entitled to the same rights and freedoms without discrimination',<sup>7,8,13</sup> The HRBA implies that some people will need supports in order to gain access to, participate in, and exercise self-determination as equals in society; therefore HRBA argues that society is obliged to provide these supports and aids<sup>9</sup>. According to HRBA, AT can be perceived as a tool that responds to human diversity and fosters an inclusive society. The aim of the AT system is to maximize social inclusion and promote the exercise of equal rights through user-driven AT provision.

The ideological framework shift in understanding disability proposed by HRBA provides a blueprint to addressing discrimination and injustices within the current AT system. HRBA re-defines the role of people with disabilities as rights holders and active members of society. As acknowledged stakeholders, HRBA recognizes that people with disabilities can make their own decisions and claim their right to AT, in conjunction with government bodies role as duty-bearers who are obligated to respond to people with disability claims and fulfill their right to AT.

HRBA empowers people with disabilities to challenge inequities within the current AT system. HRBA identifies systemic marginalization within the current AT system stemming from a discriminatory conceptualization of disability. Consequently, HRBA recognizes that people with disabilities are the key actors in their own decision-making processes. For example, as right-holders, people with disabilities have the power to decide on the AT of their choice and adopted lifestyle based on their lived experiences, therefore shifting the power dynamic between people with disabilities and healthcare professionals who have long been considered the primary decision-making authorities in terms of AT selection.<sup>11</sup>

Furthermore, HRBA emphasizes the responsibility of government bodies to respect, protect, and fulfill the right of people with disabilities to appropriate AT. Government bodies have the responsibility to address people with disabilities right to AT by developing accessible, appropriate, and user-driven AT system. Establishing an efficient and equitable AT system will only occur through developing mechanisms for addressing violations within the system. The application of HRBA to current AT system

establishes accountability mechanisms by exploring duty-bearers' commitments to UNCRPD in tandem with the investigation into current duty-bearers' actions or inactions in regard to their obligation to support, protect, and promote the right of AT users. HRBA holds the government accountable in its duty to realize rights commitments into the development of AT policy and practice that best serves AT users.

Approaching the advancement of the AT system from HRBA framework shifts the formulation of disability within the AT system from placing responsibility on individual to be able to fit in the society to holding social systems accountable for supporting human diversity and inclusiveness. Therefore, AT users are no longer presented as passive recipients of AT services in the form of medical treatment or charitable act but as people who are active members of society with equal rights. HRBA emphasizes the responsibility of the government bodies to realize the rights of AT users by reformulating current political and social policies that led to structural discrimination within the AT system in the first place.

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## Tackling Rising Dementia Burden in Low and Middle Income Countries

### Opinion Editorial

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The world's population is in a phase of rapid ageing, and an unprecedented increase in the number of older adults is expected to occur globally in the coming decades. As of 2015, there were almost 900 million older adults (>60 years old)<sup>1</sup> around the world, and this number is projected to increase to 2.1 billion by 2050.<sup>2</sup> As this "silver tide" approaches, strategies to ensure the specific health needs of this age demographic are provided for, will become increasingly paramount. Of these health needs, dementia in particular is poised to become a uniquely challenging, but critical global health priority.

Dementia is a syndrome characterized by chronic and progressive deterioration of cognitive domains such as memory and thinking, behavior, and the ability to perform ordinary, everyday activities.<sup>1</sup> Dementia is a major source of dependence and disability amongst older adults, with its disease burden contributing to about 6.3% of DALYs in adults over 70 years of age.<sup>3</sup> According to the World's Alzheimer's Report, in 2015 there were over 46 million people around the world living with dementia; and following trends in population ageing, this number is also projected to sharply increase to 131.5 million by 2050.<sup>1</sup> The societal costs will also be significant, with current annual costs circa \$818B USD today, but likely to increase to \$2 trillion USD by 2030.<sup>1</sup>

Importantly, rapidly ageing populations and rising dementia burden is a phenomenon that is

and will continue to disproportionately burden low-middle income countries (LMICs). Rates of increase in dementia burden in LMICs will easily outpace that of HICs in the years to come. This is due in part to projected patterns in population ageing expected in LMICs. Between 2015 and 2050, the number of older adults will increase by 56% in high-income countries, versus an increase of 138% in upper middle-income countries, 185% in lower middle-income countries, and 239% in low income countries.<sup>1</sup> Consistent with these disproportionate rates of ageing, 68% of persons living with dementia in 2050 will reside in LMICs.<sup>1</sup>

Notably, cited projections for dementia burden increase are based on rising growth projections of the elderly population, but stable rates of dementia incidence.<sup>1</sup> However, research suggests that rising incidence rates are likely, due to increasing prevalence of critical risk factors of dementia, such as smoking and poor cardiovascular health, prevalence of both which are increasing more rapidly in LMICs than in other parts of the world<sup>1,4</sup> Another reason these forecasts are likely underestimates is due to a lower rate of awareness of dementia as a disease in LMICS, where cognitive and behavioral changes that are hallmarks of dementia, are instead commonly perceived as a normal part of ageing.<sup>5,6</sup>

High dementia burden in LMICS is particularly problematic since the health systems of these countries have had less time to develop strategies