



Systemic Equity of Access to Speech-Language Rehabilitation for Ontarians With Communicative Disabilities



L'équité systémique de l'accès à la rééducation orthophonique pour les Ontariens ayant un trouble de la communication

KEYWORDS

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ACCESSIBILITY FOR
ONTARIANS WITH
DISABILITIES ACT

Anna Victoria Wong

Anna Victoria Wong

Nova Southeastern University,
Fort Lauderdale, FL, USA

Abstract

Ontario was the first province to enact accessibility legislation in Canada—the Accessibility for Ontarians with Disabilities Act (2005). Historically, policies, programs, and resources have focused more on people with visible (often mobility) rather than invisible (especially communicative) disabilities. This study examined whether Ontarians affected by invisible communicative disabilities enjoy equitable access to speech-language rehabilitation services under the Act and the current public health service model. To evaluate whether the Act prescribes equitable treatment for Ontarians with communicative disabilities, the statute was compared with the United Nations' (2008) *Convention on the Rights of Persons with Disabilities and Optional Protocol* and the World Health Organization's (2011b) *World Report on Disability*. The Act was also analyzed using Gil's (1992) social policy analysis framework. Population data for people with communicative versus mobility disabilities were drawn from census data published by Statistics Canada. Access to speech-language rehabilitation services in the public domain was compared with that to mobility rehabilitation services using service usage and wait-time data collected from the Ministry of Health and Long-Term Care's Health Data Branch Web Portal (<https://hsim.health.gov.on.ca/hdbportal/>). Results showed that Ontarians with communicative disabilities have been significantly less well-served in most health settings than those with mobility disabilities, primarily due to a lack of system capacity. More health investments are recommended to increase professional capacity and to improve service accessibility.

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L'Ontario a été la première province canadienne à adopter une loi sur l'accessibilité, soit l'*Accessibility for Ontarians with Disabilities Act* [Loi sur l'accessibilité pour les personnes handicapées de l'Ontario] (2005). Historiquement, les politiques, programmes et ressources visaient davantage les personnes ayant des handicaps visibles (souvent moteurs) plutôt qu'invisibles (particulièrement ceux reliés à la communication). L'objectif de la présente étude était d'examiner si les Ontariens ayant un trouble invisible de la communication bénéficiaient d'un accès équitable aux services de rééducation orthophonique en vertu de la loi et du modèle actuel de services de santé publique. Afin d'évaluer si la loi prévoit une prise en charge équitable des Ontariens ayant un trouble de la communication, celle-ci a été comparée à la *Convention on the Rights of Persons with Disabilities and Optional Protocol* [Convention relative aux droits des personnes handicapées et protocole facultatif] des Nations Unies (United Nations, 2008) et au *World Report on Disability* [Rapport mondial sur le handicap] de l'Organisation mondiale de la santé (World Health Organization, 2011b). La loi a également été analysée en utilisant le cadre d'analyse de la politique sociale proposé par Gil (1992). Les données démographiques des personnes ayant un trouble de la communication et celles des personnes ayant un trouble moteur ont été tirées des données de recensement publiées par Statistique Canada. L'accès aux services publics de rééducation orthophonique a été comparé à celui des services de rééducation motrice en utilisant les données d'utilisation des services et de temps d'attente provenant du portail Web des données de santé du *Ministry of Health and Long-Term Care* [Ministère de la santé et des soins de longue durée] (<https://hsim.health.gov.on.ca/hdbportal/>). Les résultats ont montré que les Ontariens ayant un trouble de la communication étaient significativement moins bien servis dans la majorité des établissements de santé que ceux ayant un trouble moteur, principalement en raison d'un manque de capacité des services professionnels du système. Il est recommandé d'investir davantage dans le secteur de la santé afin d'accroître les capacités des services professionnels et d'améliorer l'accessibilité des services.

Ontario was the first province in Canada to enact legislation specific to the rights of people affected by disabilities to equitable access to services. Canada currently has no relevant federal statutes; instead, provinces enact healthcare statutes to govern a publicly funded healthcare system with publicly accessible healthcare data. Analysis of government-published health outcomes, census data on people with disabilities, and surveys published by service providers and advocacy agencies can show whether the current system meets the needs of people with disabilities.

Social Background

In 2011, 13.7% of Canadians and 15.4% of Ontarians self-identified with a disability (Statistics Canada, 2014). Average annual incomes were lower for men and women with a communicative disability than for those with no disability (Human Resources and Skills Development Canada, 2011). In 2006, over half a million people in Canada reported a communicative disability. This large, and largely underserved, population could partially explain why while over two thirds of people with disabilities in Canada and in Ontario received some type of caregiving that year, almost one third reported unmet caregiving needs (Human Resources and Skills Development Canada, 2011; see **Table 1**).

Despite these statistics, the Canadian government now screens for only 10 types of disability: seeing, hearing,

mobility, flexibility, dexterity, pain, learning, developmental, mental/psychological, and memory (Statistics Canada, 2014). Most of these, but not all, may be considered visible rather than invisible disabilities. Woodward (2015) defined invisible disabilities as “not immediately noticeable ... [including] brain injuries, chronic pain, mental illness, gastrointestinal disorders, and much more” (p. 2). Interestingly, this list does not specifically include communicative disorders, nor does the Invisible Disabilities Association (n.d.). Communicative disabilities may therefore be considered one of the most invisible of the invisible disabilities, which by their very nature “the very fact that these symptoms are invisible, can lead to misunderstandings, false perceptions and judgments” (Invisible Disabilities Association, n.d., p. 2). Eliminating communicative disability from the Canadian survey reduces the influence of people with such disabilities on public policy. Because of their lack of representation in the data, analyses of current policies and provisions are necessary to ensure that they address the needs of people with communicative disabilities.

The results of this study reveal successes, opportunities for improvement, strengths, and weaknesses in current policy and the direction of speech-language pathology (S-LP) in policy and public health. This knowledge could be used to address previously unmet needs and improve quality of life for people with communicative disabilities, their caregivers, and society.

Table 1

Canadian and Ontarian 2006 and 2011 Disability Statistics

	Number (%) of individuals above 15 years*	Population of all ages in 2006 census [†]	Average income (CAD\$) by population aged 25 to 54 [†]	% of Population receiving caregiving [†]
Canada whole population	27,516,200	-	Men = 52,865 Women = 34,305	-
Canada self-identified with disability	3,775,910 (13.7)*	Communicative disability = 557,970 Men = 302,450 Women = 255,520	Communicative disability = 64,923 Men = 39,245 Women = 25,678	Receiving = 73.9 Unmet needs = 30.6
Ontario whole population	10,727,900	-	-	-
Ontario self-identified with disability	1,651,620 (15.4)	-	-	Receiving = 70.7 Unmet needs = 32.5

Note. * = Information retrieved from Statistics Canada (2014); [†] = Information retrieved from Human Resources and Skills Development Canada (2011).

Evaluation Framework

To optimize the role of the S-LP profession in improving health outcomes and quality of life for Ontarians, this study was designed to identify whether Ontarians with communicative disabilities are treated with equity under the *Accessibility for Ontarians with Disabilities Act* (AODA; 2005) and the current health service model in the public domain.

The AODA was analyzed against two seminal international standards to evaluate whether and how effectively it complies with international guiding principles. The *World Report on Disability* (World Health Organization [WHO], 2011b) was chosen for its mandate to suggest steps for all stakeholders “to create enabling environments, develop rehabilitation and support services, ensure adequate social protection, create inclusive policies and programs, and enforce new and existing standards and legislation, to the benefit of people with disabilities and the wider community” (p. xi). The *Convention on the Rights of Persons with Disabilities* (United Nations, 2008) was chosen for its international mandate to “promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity” (p. 1). AODA provisions were also analyzed according to Gil’s (1992) policy analysis framework, chosen for its status as an established policy analysis theory commonly used in the health care arena, to understand the role of the AODA for Ontarians with communicative disability. Government-published, publicly available census and health service usage data (i.e., Home Care Database, 2006a, 2006b) were used to compare access to communication rehabilitation with access mobility rehabilitation.

Research Questions

Research Question 1: Does the policy design of the AODA (2005) take into consideration the population affected by communicative disability?

Research Question 2: Does the current health service model in the public domain meet the rehabilitation service needs of the population with communicative disabilities and their caregivers by providing equitable access to this population as well as it serves populations with mobility disabilities, which are more visible?

These research questions are adapted from *Disability and Inclusion Based Policy Analysis* (Institute of Research and Development on Inclusion and Society, 2012). The policy analysis of the AODA (2005) was guided by Gil’s updated version of his 1973 framework (Gil, 1973, 1992).

Method

Instruments

The policy in the AODA (2005) was qualitatively analyzed against the *World Report on Disability* (WHO, 2011b) and the *Convention on the Rights of Persons with Disabilities* (United Nations, 2008). The AODA was also evaluated according to Gil’s (1992) policy analysis framework. Apart from the AODA, government-published, publicly available census and health service usage data (i.e., Home Care Database, 2006a, 2006b) were collected to compare service access between Ontarians seeking communicative rehabilitation services and those seeking mobility rehabilitation services.

Health and population data routinely collected and reported by municipal, provincial, and federal governments (Statistics Canada, 2006, 2012, 2013, 2014; see also Arim, 2015) were also analyzed. The population sizes of people with communicative versus mobility disabilities were acquired through census reports published by Statistics Canada (2006). Access to public speech-language rehabilitation services was compared with access to mobility rehabilitation services using service usage and wait-time data sets downloaded from the Ontario Ministry of Health and Long-Term Care’s Health Data Branch Web Portal (Home Care Database, 2006a, 2006b), a database accessible by request. Communicative rehabilitation data were compared with those of mobility rehabilitation.

Data Collection

Available data on patient characteristics, geography, demographics, disability types and severity, service format, number of visits, wait time, service costs, access challenges, caregiver burdens, and suggestions for improvement across different healthcare settings were collected to understand the needs of Ontarians affected by communicative disabilities. Equitable access was analyzed by comparing wait time, length of care, and cost of care for people with communicative disabilities with those with more visible mobility disabilities, based on data from the Health Data Branch Web Portal (<https://hsim.health.gov.on.ca/hdbportal/>). Data on S-LP services were compared with physiotherapy (PT) and occupational therapy (OT) data. Search criteria included data from January 1, 2005, to December 31, 2016.

Service statistics were compared across different settings, including in-home health professional services (HPS), in-home HPS community support services, and hospitals (Ministry of Health and Long-Term Care, 2013a, 2013b, 2014, 2015, 2016a, 2016b, 2017). It is worth noting that in-home HPS staff were employed by the funding

government agency/local health integration network, while providers of in-home HPS community support services were self-employed through multiple agencies contracted by the government to increase service capacity.

Data were collected on access and services for Ontarians with communicative disabilities requiring speech-language rehabilitation, OT, and/or PT (Home Care Database, 2006a, 2006b). Data were aggregate, contained no personal identifiers, and may have included people with both mobility and communicative disabilities. Such inclusion, however, would not affect the analysis, which compared access to speech-language rehabilitation with that of OT and PT services. Anyone with multiple needs including language rehabilitation, OT, or PT services would have been included in aggregate data.

This study was found by the Institutional Review Board to be exempt from further review under 45 CFR 46.101(b) Exempt Category 1.

Results

Research Question 1: Does the Policy Design of the AODA (2005) Take Into Consideration the Population Affected by Communicative Disability?

Gil's (1992) evaluation questions and the relevant results of analyses are shown below. The AODA (2005) principles were also benchmarked against *The World Report on Disability* (WHO, 2011b) and the *Convention on the Rights of Persons with Disabilities* (United Nations, 2008). Results of analyses from all three benchmarks follow.

Section A: Issues dealt with by the policy. The purpose of AODA (2005) was found to be aligned with the recommendations of WHO, which advocates using the *International Classification of Functioning, Disability and Health* (WHO, 2001). This classification defines limitations in functioning as *impairments* (problems with body functions or alterations in body structure), *activity limitations* (difficulties in carrying out activities), and *participation restrictions* (problems with involvement in any aspect of life, including discrimination and access. It applies the classifications *environmental factors* (products and technology, natural and built environment, support and relationships, attitudes, and services, systems, and policies) and *personal factors* (enough motivation and self-esteem to influence social participation and the discrepancy between one's capacities to perform actions and the actual performance).

To meet WHO (2001, 2011a, 2011b, 2013, 2014) environmental requirements to prevent impairments and

activity limitations adversely affecting access for individuals with disabilities, AODA (2005) emphasized access to goods, services, facilities, accommodation, employment, buildings, structures, and premises. It also addresses *participation restrictions* by providing guidelines for corporations and public service providers to ensure accessibility.

The definition of *disability* in the AODA (2005) was analyzed to determine whether the policy's design includes people with communicative disabilities as well as those with other more visible disabilities. Part I Section 2 of the AODA defined disability in five categories, three of which cover invisible disabilities including mental, developmental, and learning disabilities. Part I Section 2(c) covers the impact of communicative disabilities ("a learning disability, or a dysfunction in one or more of the processes involved in understanding or using symbols or spoken language;" AODA, 2005, p. 1). This shows that the AODA does take the communicatively disabled population into account in its policy design.

Gil (1992) also called for consideration of causal theories or hypotheses about the dynamics of the issue. Therefore, the AODA (2005) was evaluated on whether it considered major theories of disability, beginning with a review of the major theories about disability: the medical model and the social model. The medical approach tends to treat disability as either pathology or social deviance, while the social model focuses on "the social oppression" of people with disabilities and the use of language about disability (Mauri, 2011, p. 5–6).

The AODA (2005) defined *barrier* as anything in the physical, architectural, informational or communications, attitudinal, technological, policy, or practice realms that prevents a person from full social participation because of a disability (AODA, 2005). It specifies that accessibility standards require the timely identification, removal, and prevention of all barriers to "goods, services, facilities, accommodation, employment, buildings, structures, premises or such other things as may be prescribed" (AODA, 2005, p. 1). The AODA therefore considers the social exclusion faced by people with disability and aims to rectify this by enforcing compliance. This demonstrates that the rationale and design of the AODA are in line with Section A of Gil's (1992) model.

Section B: Objectives, value premises, theoretical positions, target segments, and substantive effects of the policy. The community-based rehabilitation guidelines initiated by WHO (2014) were useful in assessing the value premises and substantive effects prescribed in this section within the context of a disability policy. WHO

(2011b) recommended community-based rehabilitation to (a) promote inclusive development for people with disabilities in the mainstream health, education, social, and employment sectors and (b) emphasize the empowerment of people with disabilities and their family members; and (c) through the provision of practical suggestions, position community-based rehabilitation as a tool that countries can use to implement the *Convention on the Rights of Persons with Disabilities* (2011b).

Part III of AODA (2005) discusses development and implementation, Part IV prescribes the enforcement of accessibility, and Part V prescribes penalties for their violation. All these parts address accessibility to business, goods, services, facilities, accommodation, employment, dwellings, and building infrastructures by or before January 1, 2025 (AODA, 2005). To determine whether the services referred to included education and health as recommended by WHO (2011) in community-based rehabilitation, accessibility plans covering customer service, information and communications, employment accommodation, built environment, and general procurement at Ontario's ministries of health and long-term care, education, finance, and others were reviewed (Government of Ontario, 2014; Ministry of Citizenship and Immigration, 2013; Ministry of Economic Development, Employment & Infrastructure, 2014; Ministry of Economic Development, Trade and Employment, 2014; Ministry of the Environment, 2013; Ministry of Finance, 2013; Ministry of Health and Long-Term Care, 2013b). All met both clients' and employees' needs for accessibility in the work environment, but not their needs for accessibility to education or health as recommended by WHO (2011) in community-based rehabilitation.

The mandate of the *Convention on the Rights of Persons with Disabilities and Optional Protocol* (United Nations, 2008) was used as another benchmark to analyze the value premises and ideological orientation underlying the AODA (2005) policy objectives. The protocol targets individuals affected by long-term physical, mental, intellectual, or sensory impairments that may become barriers against full and effective participation in society (United Nations, 2008). AODA's definition of "barrier" shows that this value premise is its *raison d'être*.

WHO's (2014) *Draft Global Disability Action Plan 2014-2021* was used as a benchmark to evaluate the theories and hypotheses underlying the strategy and substantive provisions of the AODA (2005). The action plan identified three objectives: (a) to remove barriers and improve access to health services and programs; (b) to strengthen and extend rehabilitation, habilitation, assistive technology,

assistance services, support services, and community-based rehabilitation; and (c) to strengthen collection of relevant and internationally comparable data on disability and support research on disability and related services (WHO, 2014).

Substantive actions meeting the requirements of clause (b) above are included in AODA (2005) Regulation 429/07, Section 3 that policies must address "the use of assistive devices by persons with disabilities to obtain, use or benefit from the provider's goods or services or the availability, if any, of other measures which enable them to do so" (AODA, 2005, p. 2). The Regulation also specifies that staff training include a review of the purposes of the Act and the requirements of the Regulation and instruction in interacting and communicating with people with various types of disability, including those who use an assistive device, guide dog or other service animal, or the assistance of a support person. The AODA was thus designed to enforce accommodation of the needs of people with disabilities, including those requiring assistive devices or service animals, and require properly trained staff to enable such accommodation. However, access to and availability of supportive devices, animals, or people are not covered by the Act. Users with a communicative disability would likely find the system challenging to navigate, and such supports difficult or impossible to obtain, should they lack someone to advocate on their behalf.

To satisfy WHO's (2014) requirement (c) above, to strengthen local and international data collection and support research on disability and related services, the AODA (2005) assigns the Accessibility Director of Ontario the responsibility to "conduct research and develop and conduct programs of public education on the purpose and implementation of this Act" (AODA, 2005, p. 5). This provision addresses the need for research, but it requires no benchmarking against international data.

Gil's (1992) framework focused on "(a) ecological, demographic, biological, psychological, social, economic, political, and cultural characteristics; and (b) the size of relevant subgroups and of entire target segment(s) projected over time" to define the target population and examine whether the policy meets its needs (p. 71). The characteristics in (a) were aligned with WHO's (2017) social determinants of health and implied the need for social policies to ensure health equity. AODA (2005) does not address the social determinants of health and thus does not align with WHO's (2011b) advocacy of disability as a development issue, because of its bidirectional link to poverty. Gil's (1992) characteristics in (b) require the policy

to understand and project the needs of the subgroups (in this study, different types of disability) over time. While the Act provides for ongoing research on demographics and needs, the Government of Canada failed in this in 2016. Canada intentionally removed communicative disability from the 2016 census, thus hindering the identification of our target population.

The intended effects of policy objectives and the extent of their attainment were also required, as supported by Gil (1992) and United Nations (2008). As reported in *Convention on the Rights of Persons with Disabilities—First Report of Canada* (Government of Canada, 2014), AODA (2005) has resulted in a few provincial regulatory and policy changes, some of which pertain to people with a communicative disability. The report suggested that AODA establishes “the goal of an accessible Ontario by 2025” (p. 34) through developing, implementing, and enforcing accessibility standards in “customer service, transportation, employment, information and communications, and the built environment” (Government of Canada, 2014, p. 34).

Several other provincial regulations have been enacted or revised to meet AODA (2005) requirements through ensuring access and providing staff with training in relevant rules and regulations. One example of accessibility improvement in the judiciary system was by the Ontario Provincial Police Force. The Force introduced video conferencing to provide sign language interpreters for the deaf or hard-of-hearing and revised its policy to ensure an accused with a cognitive disability could have a support person during interviews (Government of Canada, 2014). Not only does this provide more accommodation for the visible disability of hearing impairment, but it may also be expanded to help people with cognitive disabilities that often impair their receptive communication. This would improve equity for interviewees who would normally be disadvantaged by their cognitive disability during police interviews. Other Ontario regulations and policies were instilled to ensure effective information dissemination to people with communicative disabilities (Beer, 2015), including emergency and safety information, workplace emergency safety information individualized according to disability and needs, and compliance of corporate websites and web content to the international *Web Content Accessibility Guidelines 2.0* (Government of Canada, 2014).

To ensure fair access to health services, AODA (2005) has effected changes in health-related policies. The Ontario *Personal Health Information Protection Act* (2004) balances individuals’ right to the privacy of their health information with the legitimate needs of health care providers to access and share such information. Before any

treatment, health practitioners in Ontario must now obtain consent either from the patient or a substitute decision maker authorized for the relevant time period (Government of Canada, 2014).

Gil’s (1992) framework also considered the unintended effects of a policy. Disproportionately more human rights cases were heard in Ontario than federally. Of the 3,242 applications received by the Human Rights Tribunal of Ontario in 2013–2014, 54% concerned individuals with disability (Social Justice Tribunal Ontario, 2014). These legal proceedings are typically very time-consuming, complex and costly. Individual case law is also less likely to facilitate broader systemic change (Moran, 2014), which is one reason advocates for people with disabilities began to examine other paths to inclusion.

Gil’s (1992) model also examined the costs and benefits of the policy. For 4 years, starting in 2008–2009, the Directorate of Ontario had an annual budget of \$4 million for developing new accessibility standards (Accessibility Directorate of Ontario, 2009) and a framework for AODA (2005) compliance (Accessibility for Ontarians with Disabilities Act Alliance, 2008). This is a stark contrast to the economic benefit proper funding and implementation could have yielded—a possible increase of up to \$600 per capita per year in Ontario gross domestic product (Kemper, Stolarick, Milway, & Treviranus, 2010).

Section C: Implications of the policy for the operating and outcome variables for social policies. Section C of Gil’s (1992) framework examined changes, consequences, and social control of changes in resources, work, and production; rights, governance, and legitimation; and reproduction, socialization, and social control in relation to (a) circumstances of living of individual, groups, and classes; (b) power of individual, groups, and classes; (c) nature and quality of human relations among individuals, groups, and classes; and (d) overall quality of life.

The AODA (2005) has 13 references to workplace or employment, but no reference to education or health, showing its limited regard for users of health and education services. Part III of the statute addresses the governance and legitimation of the policy. Part V Sections 21 and 22 address the rights of the user to accessibility and to appeal. Part III Section 7 specifies the different classes of business obligated and individuals protected. The AODA did address the WHO’s (2011) recommended need for research as mandated for the Accessibility Directorate of Ontario (2009) in Part VIII Section 32(3e). Contrary to WHO recommendations, it did not require benchmarking their provisions and evaluation efforts or comparing with

international data. The onus of obtaining assistive support rests on the users with communicative disability.

Research Question 2: Does the Current Health Service Model in the Public Domain Meet the Rehabilitation Service Needs of the Population With Communicative Disabilities and Their Caregivers by Providing Equitable Access to This Population as Well as it Serves Populations With Mobility Disabilities, Which are More Visible?

This is a quantitative analysis that involves comparison of rehabilitation service usage data against census data, and comparison of rehabilitation service data between the population affected by communicative disability with that affected by mobility disability (Home Care Database, 2006a, 2006b). Service usage between the population with communicative disability and mobility disability, published health service data, costs, and wait times for speech-language pathologists were used for communicative disability, and for occupational therapists and physiotherapists mobility disability were compared. Data were drawn from the Ontario Ministry of Health and Long-Term Care—Community Care Access Centres Management Information System comparative reports (Ministry of Health and Long-Term Care, 2013a, 2013b, 2014, 2015, 2016a, 2016b, 2017). Comparisons published in the Ontario Ministry of Health and Long-Term Care's (2016b) healthcare indicator tool from 2013–2017 were also collected for analysis and comparison.

Service statistics were also compared across different settings, including in-home HPS, in-home HPS community support service, and hospitals (Ministry of Health and Long-Term Care, 2013a, 2013b, 2014, 2015, 2016a, 2016b, 2017), as this study focused on access by the adult population with disability in relation to their overall health indicators. To compare rehabilitation service usage data across all disciplines, the 90th percentile and median were used as they are the two standard comparison points used by the Office of the Auditor General of Ontario (2015, 2016)—the provincial government organization that audits all provincial ministries and programs. The 90th percentile and median were the comparison points used to audit service data.

Based on available census data (Statistics Canada, 2006, 2012), the prevalence of all disability and mobility disability decreased in Canada and Ontario from 2006 to 2011. In 2006, the relationship among people with communicative disability and mobility disability in Ontario was similar to that across Canada. In 2006, the proportion of people with communicative disability was 19% of that of those with mobility disability in Canada and 17.3% in Ontario. Projecting that the population of people with communicative disability followed the same trend and

percentage of decrease as people with mobility disability, they would form 10% of the total population with disability in Canada and 8.95% in Ontario in 2011.

To compare accessibility to health services between populations with communicative disability and with mobility disability, with the absence of census data on communicative disability in Ontario and Canada in 2011, benchmarks were created through extrapolation of available data. The percentage of the population with communicative disability was estimated by averaging the projected 10% in Canada and 8.95% in Ontario (above) to 9.5%, or 385,711 people with communicative disability out of 3,775,910 with any disability, equivalent to 1.3% of the total population of 27,516,200 in 2011. In the same vein, the percentage of population with communicative disability in relation to that with mobility disability was projected as 18.2%. These figures are required to show the variance between services received by populations with communicative disability versus mobility disability. Based on these benchmarks, health service usage statistics, operating costs, and workloads of health professionals for the population with communicative disability were compared with those of the population with mobility disability across different settings.

Two pieces of contextual information are important to note. First, healthcare providers of in-home HPS were employed by the funding government agency, while providers of in-home HPS community support services were self-employed members of a network of multiple community support agencies contracted by the government to increase service capacity. Second, hourly pay rates of S-LP professionals, OTs, and PTs range widely. In labor injury cases, hourly rates for registered services in 2016 were CAD\$80 for S-LP, CAD\$24 for PT, and CAD\$59 for OT services (Workplace Safety & Insurance Board Ontario, 2018a, 2018b). For regular rehabilitation cases covered by major insurance companies, the 2016 hourly rates were CAD\$150 for S-LP, CAD\$150 for PT, and CAD\$145 for OT services (University of British Columbia, 2016). S-LP services generally cost more than PT and OT services, attributing to the difference in operating expenses.

Service usage data showed a few areas where people with communicative disability fared better than their mobility counterparts from 2013 to the end of September 2016 in both 90th percentile and median data (Home Care Database, 2006a, 2006b). In in-home HPS community support services, people with communicative disability had 46% to 424% of the level of service provided to those with mobility disability and 98% to 175% more visits than were made to those with mobility disability; higher operating costs and unit cost per individual were incurred for people with

communicative disability rather than mobility disability. For in-home services, people with communicative disability had a higher unit cost per visit than those with mobility disability. People who required S-LP services enjoyed much better access to care with in-home community support services than those in other settings, including hospitals.

There are, however, more areas of access disparity based on the service usage data in non-community support services in-home HPS settings from 2013 to the end of September 2016: (a) S-LP services accounted for one third or less of OT and PT services combined, (b) one third fewer individuals had S-LP service than OT and PT service, (c) there were 25% fewer visits made by S-LP professionals than by OT and PT professionals, and (d) total service hours rendered by S-LP professionals were 27% to 43% of those by OT and PT professionals. In the hospital setting during the same period, all S-LP indicators in the 90th percentile data were consistently worse than those of OT and PT. The operating expenses for S-LP services were one third less than for PTs and OTs combined, the total S-LP attendance days were less than half of mobility disability therapy days rendered, and the workload for S-LP professionals in the hospital setting was 1.3 to 1.5 times heavier than for OT and PT professionals combined. Results from the median data were even worse, showing a significant gap in resource investment that under-empowers service providers to match client needs.

In the in-home setting during 2013–2016, client interactions and individuals receiving S-LP were only 20% to 30% of those receiving OT and PT and the average waiting time for S-LP service was 2.9 to 4.1 times longer than for OT and PT combined. Although people with communicative disability had access to more services through in-home, outsourced S-LP services than other settings, they also waited much longer than their mobility counterparts.

Service access for people with communicative disabilities during the time period researched was not equitable to that for people with mobility disabilities. Overall service capacity was proportionally lower for S-LP services than for OT and PT services, as shown by the lower number of individuals served, lower number of client interactions, and longer wait times across all settings. Equally apparent are the lower operating expenses, fewer attendance days, and higher workload for S-LP professionals in the hospital setting.

The disproportionate workload of S-LP professionals was confirmed in a research report by graduate-level S-LP students at the University of Toronto and published by Ontario Association of Speech-Language Pathologists and

Audiologists (2014, 2016). The reported caseload of 47 per speech-language pathologist should be taken with caution, however, as it represents only school-based caseloads and is therefore not necessarily representative of other work settings (University of Toronto Students of Speech-Language Pathology Graduate Program, 2011).

Discussion

The data substantiating the answers to the two research questions showed that the current version of the AODA (2005) has gaps that can be addressed by including provisions to mandate data collection, international benchmarking, and support from professional service providers to users seeking access to assistive support. Findings from service usage data also show that access to S-LP rehabilitation services by populations affected by communicative disability was not at par with access to OT and PT rehabilitation services by populations affected by mobility disabilities. To improve access and reduce wait times, the public health system could expand professional training and employment opportunities to increase the supply of S-LP professionals, streamline the system for users to access S-LP services, and invest in S-LP services as well as it does in OT and PT services.

Implementing these changes would ensure fair access to health services and better chances for more equitable social determinants of health for people affected by communicative disabilities. These changes would also improve social, employment, and economic participation by individuals with communicative disability and their caregivers. Positive social effects would likely be lasting and widespread. The additional health care investment would ensure health equity, distributive justice, and fair access for all, and would bring Canada and Ontario up to par with international guidelines.

An increase in service capacity would not only improve accessibility to services in general, but it would also allow for more specialized services for individuals with communicative disabilities. Roulstone and Harding (2013) suggested policy makers and service providers adopt the concepts of *service availability* and *service accessibility* to prevent medically underserving the community's S-LP needs on a systematic basis. These systemic challenges could be addressed if the overall capacity for S-LP services was increased according to the size of the population with communicative disability to match the service capacity per capita for the population with mobility disabilities. As Wickenden (2013) proposed, a country should have both capacity and structures in place to develop a specialized professional service to serve people with communication disabilities. This process could begin with talent

development at graduate schools and increased funding for more S-LP employment opportunities across all clinical settings, and result in the establishment of a more efficient referral process for clients.

Apart from improved access to health services within the system, the AODA (2005) also has some gaps to fill to meet WHO (2011) and United Nations (2008) recommendations. Necessary improvements are discussed in detail below.

Help in Obtaining Assistive Support

The AODA (2005) could require service providers to help individuals and caregivers affected by communicative disability to navigate the system to seek the appropriate, financially subsidized assistive support. This would be feasible since the S-LP Code of Ethics already requires S-LP professionals to advocate for the best interests of their client, use all possible resources to ensure quality and comprehensive services, and inform the client of all appropriate programs and services (College of Audiologists and Speech-Language Pathologists of Ontario, 2011). What is missing is a requirement for the S-LP professional to support the client throughout the process. Explicit mention of that in the AODA would empower and mandate all relevant service providers to support individuals with disabilities throughout the process of seeking, sourcing, applying for, and obtaining funding for assistive support.

Match Access to Health Services With Access to Employment and Add Provisions to Ensure the Social Determinants of Health

Individuals with communicative disability are at the bottom of the hierarchy of exclusion, not only because they are disabled, but also because they cannot advocate for themselves. Their communication barriers often deny them the right to participate in education, employment, community, and politics and deprive them of access to health care, social protection, and justice (Wickenden, 2013). These gaps could be addressed by ensuring improvements in the social determinants of health for people with communicative disabilities.

Require That Research Data be Benchmarked Against International Data

The AODA (2005) could mandate the Accessibility Director of Ontario to conduct research and benchmark against international data, and to develop and conduct programs to educate the public on the purpose of the Act (Government of Ontario, 2014). This would meet WHO's (2011, 2014) recommendations to expand research programs, improve information and access to good practice guidelines, and collect internationally comparable data on

disability and support research on disability and related services.

Socioeconomic profiling of the population with communicative disability. In existing census and disability reports, economic statistics reflect the overall disability population in Ontario, but not specifically those affected by communicative disability. Filling in the data gaps on the quality of life and social determinants of health for people with communicative disabilities would shed light on socioeconomic disparities between people with communicative versus mobility disabilities and inform future policy and service development decisions. To address the discrepancies in health service usage data between populations with communicative and mobility disabilities, the overall system capacity for S-LP services needs to increase. This would entail increased professional training, employment opportunities across all clinical settings, and referrals of patients to S-LP services.

Professional training of speech-language pathologists.

Ontario, with a population of 13.6 million, currently has three graduate schools, with class sizes under 50 each, developing S-LP professionals. Illinois, with a comparable population, has 13 graduate schools, with class sizes over 100 each, accredited by the American Speech-Language-Hearing Association to train S-LP professionals (American Speech-Language-Hearing Association, n.d.). To increase the supply of S-LP professionals, new funding would be required to develop more programs and support clinical placements.

Employment opportunities in all clinical settings.

As the health system in Ontario is mostly government funded, new health investments are required to increase employment opportunities for speech-language pathologists. Most of the investment should be made in settings other than in-home community support services, to create positions for government healthcare employees rather than self-employed practitioners from outsourced agencies.

Referral of patients to speech-language pathology services. Because most S-LP services outside of the hospital setting are not funded by government health care, clients need to understand the system to refer themselves to a speech-language pathologist, a process through which they are not well supported. With new investments in all settings outside of in-home community support services, more clients requiring S-LP services would benefit because there would be more S-LP jobs, government-funded S-LP services would remove the financial barrier for clients, and speech-language pathologist caseloads should fall below

50, allowing more in-depth services and longer-lasting programs.

With increased capacity and reduced barriers, more referrals to S-LP services would be feasible. There could be a formal process to match appropriately skilled speech-language pathologists with the needs of clients and their families. Currently, clients outside the hospital system either contact their local community care access centre for assessment and referral to government funded S-LP services or they search the Ontario Association of Speech-Language Pathologists and Audiologists website (<https://www.osla.on.ca/default.aspx>) for areas of practice, geographical coverage, client age group, and language of service. With government investment in S-LP jobs, the two processes could be combined. Service users could still go through the Ontario Association of Speech-Language Pathologists and Audiologists website to identify their preferred practitioners and they could apply through their local community care access centre for health service coverage.

Apart from professional capacity, the capacity of people with communicative disabilities also needs to be increased. Speech-language pathologists with capacity-building training for people with communicative disability could help them develop “skills and confidence to lobby and self-advocate within political arenas ... [and] bring about the emancipatory change they want” (Wickenden, 2013, p. 19). Inequalities faced by people with disabilities include being denied equal access to health care, employment, education, or political participation. Wickenden (2013) advocated for speech-language pathologists to work in a more empowering way to disrupt the existing hierarchy that excludes people with communicative disabilities from assuming equal roles in the social system.

Recommendations for Future Research

To address the needs of people with other invisible disabilities, this study could be repeated for people with learning disabilities and mental disabilities. The same methodology could be used to analyze AODA's (2005) provisions and health usage data for mental health and learning disabilities in contrast with more visible disabilities.

Conclusion

Lack of accessible communication and information has affected the lives of many people with disabilities. Individuals with receptive and expressive challenges are at a significant social disadvantage, which is particularly acute in sectors where effective communication is critical, such as health care, education, local government, and justice.

This study serves to monitor the areas of health access disparity between communicative and mobility rehabilitation, the under-met needs of the population with communicative disabilities, and the need for policy and system modification to ensure health equity and distributive justice. Aligned with WHO (2001, 2011a, 2011b, 2013, 2014) and United Nations (2008) recommendations, the proposed improvements are designed to address the gaps with minimal changes to the system. These recommendations would remove barriers to rehabilitation services for people with communicative disability through reforming policies, laws, and delivery systems. Financial barriers would be removed by developing funding mechanisms to address service costs. Accessibility barriers would be minimized by increasing human resources for capacity and expanding and decentralizing service delivery. Barriers against independence would be overcome by widespread use of affordable technology and assistive devices. Studies like this one provide critical input for policymakers using evidence to facilitate a higher level of equity in health service accessibility for all.

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Author's Note

Correspondence concerning this article should be addressed to Anna Victoria Wong, Community Family Services of Ontario, 4051 Gordon Baker Road, Unit A, Scarborough, ON, M1W 3E8, Canada. Email: annaVwong@gmail.com

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