# Perspectives of AAC service providers in Canada on factors influencing effective use of AAC technology

Steph Lackey, Seamus Burnham, Glenda Watson Hyatt, Tracy Shepherd, Shane Pinder, T. Claire Davies, & Beata Batorowicz

- Steph Lackey PhD Candidate, School of Rehabilitation Therapy, Faculty of Health Sciences, Queen's University, lackey.s@queensu.ca
- Seamus Burnham Master's of Applied Science Candidate, Mechanical and Materials Engineering, Queen's University
- Glenda Watson Hyatt- Graduate Student, Mechanical and Materials Engineering, Queen's University
- Tracy Shepherd Director, Centralized Equipment Pool, Holland Bloorview Kids Rehab Hospital & President, International Society for Augmentative and Alternative Communication
- Dr. Shane Pinder Director of Rehabilitation Engineering, School of Rehabilitation Therapy, Faculty of Health Sciences, Queen's University
- Dr. T. Claire Davies- Professor, Department of Mechanical and Materials Engineering, Faculty of Engineering and Applied Science, Queen's University
- Dr. Beata Batorowicz, Professor, School of Rehabilitation Therapy, Faculty of Health Sciences, Queen's University, beata.batorowicz@queensu.ca

Approximately 1.5% of the Canadian population five years and older have difficulty speaking or being understood, however it is not known how many people use augmentative and alternative communication (AAC) (Statistics Canada, 2007). Research evidence supports the use of AAC to improve communication and social participation for people with communication disabilities. Despite the benefits of AAC systems (i.e., tools, communication aids, and strategies), according to a national survey in Canada, 51.5% of children and 72% adults with a communication disability did not have their needs met by specialized equipment or aids (Statistics Canada, 2008). This suggests barriers to accessing AAC systems, however, little is known about AAC services across Canada. We sought to explore the perspectives of service providers on current practices and services and identify barriers and facilitators to the provision and use of AAC in Canada.

To explore AAC services in Canada, the cultural, political, and geographical context must be considered. Canada is geographically the second largest country in the world, yet it has a relatively small population of approximately 37 million residents (Statistics Canada, 2023). Canadians are spread across the vast landmass divided into ten provinces and three territories. Canada is home to a culturally diverse population and has two official languages – English and French. Education and most health care services are administered by the provinces or territories, which are responsible for managing funding and delivery of services, including provision of assistive devices (Intergovernmental Affairs, 2022). These factors have implications for service delivery and the practices of service providers in Canada.

This article discusses implications of findings of the research study, *Factors influencing* access to and effective use of augmentative and alternative communication (AAC): Perspectives of AAC services providers in Canada (Lackey et al., 2023). We conducted online focus groups

with 23 AAC service providers across nine Canadian provinces, who worked with people who use AAC and were involved with the assessment, recommendation, and/or implementation of AAC. Participants were comprised of 14 speech language pathologists (SLP), six occupational therapists (OT), two communicative disorders assistants (CDA), and one teacher. Our research team identified common themes that reflected current practices and service-related barriers and facilitators to AAC use. These are described below.

## *Need for Accessible and Equitable Services*

Variability in service provision was revealed in discussions about current practices and structure of services. As expected, variability in practice was reflective of differences among service provider roles, work settings, and the specifical population being served (e.g., children or adults, direct or indirect access methods). As stated by an SLP, "my role varies a little bit depending on the age, the diagnosis, the medical environment of the user." Differences in services were also related to geographical location, funding models, eligibility for services, and access to resources including devices and personnel. Inconsistency in personnel is illustrated in the contrast between these two statements. One participant explained that as an SLP in a rural area, "we [SLPs] serve everybody doesn't matter [the severity]...there are no extra people". This was not the case for another participant, an SLP from another province, who stated "we always have an OT on the team, and sometimes even a physical therapist available." In Canada, provincial funding may largely contribute to differences in services across the country. Service providers reported different experiences with funding depending on their province. One SLP explained, "we have a lot of funding...which is a real luxury, I think, compared to the rest of Canada." In contrast, an SLP from a different province described lack of funding as "one of the biggest barriers" to accessing AAC.

Some participants spoke of supportive resources such as trial devices, funding, and access to other professionals. Others described the lack of such resources as a challenge to their practice. Our findings raise questions about the equity of services across Canada, particularly if there is a scarcity of AAC resources in rural and remote areas. Our study suggests the need for further exploration of how services are organized in Canada and a need to develop minimum standards of service delivery to support equitable and accessible service.

## Assessment and Recommendation of AAC Systems

As discussed by service providers, the assessment process involved consideration of a combination of factors related to the individual who uses AAC and AAC systems. Participants described holistic approaches to assessment which, for some participants, involved guidance from assessment tools and an interdisciplinary team. Participants named several details that informed decision making around recommending the 'right' device including client factors such as goals, physical ability and preferences, and factors related to the AAC system such as features, compatibility with other technology, and size. For example, an SLP stated, "we will often also take into account the size of the device, or the means of communication chosen, depending on whether the [individual] is in a wheelchair...in a walker, whether there are difficulties of balance." A participating CDA mentioned multilingualism, as another factor to consider, noting that there can be "a second language that maybe the family, especially grandparents, [speaks]...the child needs to communicate with all the family". The ultimate goal of assessment is to facilitate the connection between the individual who uses AAC and an AAC system that meets their personal needs and preferences. Participants expressed interest in more guidance, such as guidelines or tools, and cited the need for more empirical evidence to support decisionmaking in the provision of AAC systems. There is a need to develop comprehensive tools and

processes that can support service providers and increase consistency in service delivery across provinces.

#### Effective Implementation of AAC System

Participants indicated that their roles, with respect to the implementation of AAC systems, differed. Some provided training or support following the recommendation of AAC systems whereas, others provided consultative service and therefore focused only on assessment and prescription of AAC systems with government funding. When speaking to what is important to AAC use, an AAC teacher emphasized, "ongoing training and support...they need to actually implement a device in different contexts." Participants acknowledged that intervention in the natural environment of the person who uses AAC is beneficial; however, they admitted this is not always possible due to time, resources, and their role. A participating SLP explained, "there's a time factor because there's very few of me and teams to... support [implementation]." This raises questions as to how different service delivery models impact effective use of AAC systems in real world contexts. Establishing minimum standards of practice may help to ensure the thoroughness of support with consideration for available funding and personnel resources needed to meet such standards.

When asked how outcomes of AAC intervention are measured, participants described multiple indicators of success such as achievement of client goals, positive feedback, independent use of AAC system, participation in social activities, and support from communication partners, such as family. Service providers reported several different measures of success which were often informal suggesting a need to adopt standard tools to measure use of AAC and the effectiveness of AAC services. Such metrics could provide evidence of the important work of AAC services providers and inform areas for improvement.

### **Collaborative Practices**

Participating service providers acknowledged that effective use of AAC requires support of professionals, family members and peers. The most immediate support, primarily family, was described as influential to the selection of AAC systems and key to implementation. Many participants discussed how working together is key to success. One OT participant expressed that "implementation happens as a very collaborative approach" involving the client and often members of their family. Another OT participant spoke positively about collaboration, stating, "you can have four different professionals in one client appointment...I definitely enjoy that collaborative piece of it." Conversely, service providers discussed the challenges to collaboration such as lack of time, communication breakdown, and conflicting expectations; for example, between family, practitioners, and/or school staff.

The importance of team approach and collaboration was underscored by the concerns expressed by participants about impact of the general lack of knowledge about AAC. Participants explained that misconceptions held by key communication partners, such as staff in schools and long-term care settings, created barriers to AAC use. For example, an OT explained that the attitude of communication partners, such as discomfort with technology or fear of breaking an AAC system, can limit AAC use. Another barrier encountered in schools, as described by some participants, was the notion that access to AAC could be limited to scheduled times, denying the right to communication. AAC service providers are well positioned to reduce such barriers through collaborative practices, sharing information and building capacity while working alongside families, schools, and other professionals.

## **Implications for Research & Future Directions**

Our research revealed that provision of AAC services is variable across Canada, largely based on location. Evidence from previous research suggests that service delivery models and processes influence AAC recommendations (Batorowicz and Shepherd, 2011; Lindsay, 2010; Lynch et al., 2019). However, more research is needed to better understand the impact on access to and use of AAC systems for people across Canada. AAC assessment is complex and multifaceted, and service providers need support to reduce the gap between research and practice (Lynch et al., 2019; Murray et al., 2019). Research to identify service-related factors supportive of AAC will help to shape priorities for AAC services and can help to develop practice guidelines needed to support the decision making of AAC service providers and foster equitable services in Canada. This is in line with previous research from the United Kingdom that highlighted the need for service delivery models and decision-making processes that are clientcentered, collaborative, and supported by evidence (Lynch et al., 2019; Murray et al., 2019; Webb et al., 2019). Our team has been also seeking input from people who use AAC, their family and caregivers regarding priorities of AAC services. A Delphi study is currently underway, which aims to identify joint priorities (i.e., consensus among different stakeholders) with respect to AAC in Canada.

## Conclusion

This research helped to identify service-related factors that influence the access to and use of AAC from the perspectives of AAC service providers across Canada. The findings shed light on the realities of AAC services as well as opportunities for improvement. AAC services in Canada may benefit from development of practice guidelines to support decision making, implementation of collaborative practices, and improved access to resources to provide quality and equitable service nationally.

#### References

- Batorowicz, B., & Shepherd, T. A. (2011). Teamwork in AAC: Examining Clinical Perceptions. *Augmentative and alternative communication*, 27(1), 16-25. https://doi.org/10.3109/07434618.2010.546809
- Intergovernmental Affairs. (2022). *Provinces and territories*. Government of Canada. https://www.canada.ca/en/intergovernmental-affairs/services/provinces-territories.html
- Lackey, S., Burnham, S., Watson Hyatt, G., Shepherd, T., Pinder, S., Davies, T. C., &
  Batorowicz, B. (2023). Influential factors on effective use of augmentative and
  alternative communication (AAC): Perspectives of AAC service providers in Canada.
  [Manuscript submitted for publication].
- Lindsay, S. (2010). Perceptions of health care workers prescribing augmentative and alternative communication devices to children. *Disability and Rehabilitation: Assistive Technology*, 5(3), 209-222. https://doi.org/10.3109/17483101003718195
- Lynch, Y., Murray, J., Moulam, L., Meredith, S., Goldbart, J., Smith, M., Batorowicz, B., Randall, N., & Judge, S. (2019). Decision-making in communication aid recommendations in the UK: cultural and contextual influencers. *Augmentative and Alternative Communication*, 35(3), 180-192. https://doi.org/10.1080/07434618.2019.1599066
- Murray, J., Lynch, Y., Meredith, S., Moulam, L., Goldbart, J., Smith, M., Randall, N., & Judge, S. (2019). Professionals' decision-making in recommending communication aids in the

UK: competing considerations. *Augmentative and Alternative Communication*, *35*(3), 167-179. https://doi.org/10.1080/07434618.2019.1597384

Statistics Canada. (2007). The 2006 Participation and Activity Limitation Survey: Disability in Canada Catalogue no. 89-628-XIE — No. 002 https://www150.statcan.gc.ca/n1/en/pub/89-628-x/89-628-x2007002eng.pdf?st=CT5A1ceh

Statistics Canada. (2008). *Table 18 Use and need for assistive technology for children aged 5 to 14 with disabilities, by disability type, Canada, 2006.* Government of Canada. https://www150.statcan.gc.ca/n1/pub/89-628-x/2008005/t/5201106-eng.htm

- Statistics Canada. (2023). Census Profile. 2021 Census of Population. Catalogue no. 98-316-X2021001. https://www12.statcan.gc.ca/census-recensement/2021/dppd/prof/index.cfm?Lang=E
- Webb, E. J. D., Lynch, Y., Meads, D., Judge, S., Randall, N., Goldbart, J., Meredith S.,
  Moulam, L., Hess, S., & Murray, J. (2019). Finding the best fit: examining the decisionmaking of augmentative and alternative communication professionals in the UK using a
  discrete choice experiment. *BMJ Open*, 9(11), e030274.