

Augmentative and Alternative Communication: Access and inclusion for children with sensory disability and additional needs

Sarah Marshall¹

Vicky Cheung¹ and Emma Bugarija¹

¹ NextSense

Short Abstract

The literature shows that sensory disability is a disability of access- access to information, people, place, things and systems. In addition to this, 30-40% of children with hearing loss and 44% of children with vision loss present with additional disability or developmental needs. Providers delivering services to clients with sensory disabilities (hearing and/or vision loss) have a duty of care to understand varied client and family needs and innovate available tools to maximise clients' inclusion and independence in their interactions with others. This short presentation of three case studies explores the adaptations and strategies utilised to increase access when hearing and/or vision loss is present in children with additional disability and needs (cerebral palsy; CHARGE Syndrome; Goldenhar Syndrome). Considerations in choice of communication mode is discussed, e.g., types and degrees of vision and/or hearing loss, physical abilities, cognition and family capacity to incorporate recommended communication strategies within their daily routines. Limitations of Augmentative and Alternative Communication (AAC) systems when used with children with sensory disabilities are outlined. The importance of working within a Team Around the Child early intervention model is emphasised as well as the need to be agile and innovative in the intervention approach to adapt consistently to match child and family progress. Recommendations for further adaptations and innovation in service delivery are made. Opportunities for future research are identified.

Long Abstract

Contemporary research shows that individuals with complex communication needs benefit from the use of Augmentative and Alternative Communication (AAC) to aid communication. This includes both the use of aided and unaided AAC. Speech Pathology Australia (2016) defines aided AAC as the use of an external item to aid communication such as low and high technology communication systems; and unaided AAC as the use of communication techniques that do not require the use of external aid such as gestures, manual signs and body language.

Unfortunately, most aided AAC systems utilize visual displays and rely heavily on a child's ability to recognize and use graphic symbols (Blackstone et al., 2021). This poses challenges for children with vision loss and concomitant complex communication needs. This impacts their access to AAC and hinders their ability to express their wants and needs, and to access and connect with the world around them.

Many aided AAC devices do not cater for the deafblind population, with most devices relying on sight or strong auditory skills (e.g. auditory scanning) (Caporusso et al., 2014). It is known that the incidence of additional disability or developmental needs within the hearing and vision loss population is significant, estimated at around 40% (Nunez-Batalla et al., 2023; Silveira et al., 2022). In addition, the percentage of deafblind individuals with additional disabilities is approximately 87% (National DB website). Unfortunately, deafblind individuals are being excluded from essential AAC usage.

Research and evidence-based intervention strategies for supporting the use of AAC in individuals with sensory disabilities is currently insufficient. This population is known to be complex and heterogeneous (Cooney et al., 2015). The population is also small which places them at risk of anonymity, and inhibits the prospect of the production of replication studies. Therefore, this presentation aims to add to the body of knowledge and understanding about the use of AAC in individuals with sensory disabilities.

NextSense is a non-for-profit organization that provides assessment and intervention services to the Deaf, hard of hearing, blind, low vision and deafblind community. As certified practising speech pathologists within the organization, it is our duty of care to ensure that services delivered are evidence-based, inclusive and maximise potential. In this short presentation, we will use three case studies to highlight criteria for selecting accessible and appropriate communication methods for children who have one or more sensory and additional needs. We will also address the provision of suitable tools that break down barriers so these children are included and can interact effectively with their world. The common themes within the three case studies assert the importance of parent/carer, peer and school involvement in AAC use for communication. Future research investigating the changing priorities that families, peers and schools report when supporting the communication needs of individuals with sensory disabilities is recommended. In addition, longitudinal studies documenting the effectiveness of intervention and assessment methods should be conducted to establish a reference for future methodologies.

The first case study discusses a 10-year-old boy with **Cerebral Visual Impairment (CVI)** and **cerebral palsy (CP)**. CVI is a brain-based visual impairment in which the visual pathways or visual processing areas of the brain are damaged, which is the common cause of childhood blindness or low vision (Silveira et al., 2023; *Cortical Visual Impairment (CVI) | Understanding and Support | a Shared Vision*, 2015). We will examine the behavioural characteristics presented by children with CVI, the initial assessment using the implementation of the Student, Environment, Tasks, & Tools (SETT) framework (Zabala, 2005), intervention approaches and modifications, visual training and partner-assisted auditory scanning to maximise access and inclusion.

The second case study discusses a 5-year-old girl with **CHARGE syndrome**. CHARGE syndrome, a rare complex and variable genetic syndrome (Slavin & Hartshorne, 2019; GARD website) which presents with sensory deficits that impact on development of communication and language (Bashinski, 2015). We will discuss the need for individualisation and the importance of factoring in the learner's preferred mode of communication (natural gestures, vocalisations, eye gaze, facial expressions, Auslan and a speech generating device), in various settings.

The third case study discusses a 12-year-old boy with **Goldenhar Syndrome**, causing dual sensory impairment characterised by total vision loss due to bilateral anophthalmia, as well as

unilateral moderate conductive hearing loss due to microtia and atresia. We will discuss innovative and appropriate, accessible communication methods for children with multisensory and complex needs. We will highlight the importance of interaction and building rapport/trust through a child-led approach with children who have dual sensory needs and additional disabilities, to maximise motivation and readiness to learn within intervention sessions (Binns et al., 2021). We will also review the importance of inclusion through a ‘total communication’ approach, where communicative preferences are supported and respected, and opportunities to communicate in a variety of modes are always provided (Jones, 2000; O’Neill et al., 2018).