

Welcome

Hello and welcome to this Additional Learning Needs (ALN) webinar. Over the next hour and 15 minutes we will be exploring the following ALN's: -

- Deafness,
- Mutism,
- Sensory Processing Disorder,
- Autism
- ADHD

We will be looking at the identification and diagnoses for these different ALN's, strategies and barriers. The first ALN we will be covering is Deafness, covered by myself, Ceri Williams.

Introduction

Today's webinar we will be exploring how deafness is identified and diagnosed in children alongside some barriers and strategies. The image in the poster demonstrates that around 90% of Deaf children are born to hearing parents, with over 50,000 deaf children in the UK being affected by mild to profound hearing loss (National Deaf Children's Society (NDCS), 2021a; Education Scotland, no date; Wright *et al.*, 2021; NDCS, 2022, British Deaf Association, (BDA) 2024). Deafness is the third most common disability worldwide (BDA 2015; GBD 2019 Hearing Loss Collaborators (2021), yet it often goes unnoticed in public spaces. Additionally, in Wales alone there are over 2,000 Deaf children, with three Deaf babies born daily in the UK (NDCS, 2021b). These figures highlight the need for early detection and interventions to support Deaf children and their families.

Identifying and diagnosing Deafness

The Automated Otoacoustic Emission (AOAE) test is a newborn hearing screening ideally completed within the first three to four weeks of life, but it can be completed up to three months old. The image on the left illustrates the AOAE screening is performed, which is a small, soft earpiece gently placed in the baby's ear to play soft clicking sounds. The image next to it shows the Automated Auditory Brainstem Response (AABR) screening, a follow-up test used if the AOAE test results are unclear. The AABR test involves placing sensors on the baby's head and using soft earphones to measure the baby's responses to clicking sounds. Both screening tests are quick, painless, and designed to identify potential permanent hearing loss in babies early on (National Health Service, 2024; NDCS, 2024).

Heidari, Olyaei Manesh, and Rajabi (2015) mentions that using AOAE screening alone is less effective due to its lower sensitivity of 0.77 compared to the single-stage AABR screening, which has a sensitivity of 0.93. AOAE may fail to detect auditory neuropathy, where the auditory nerve does not transmit signals properly despite normal inner ear function. Gellrich *et al.* (2023) further support these findings, noting that newborns who fail AOAE but pass AABR often present with hearing impairments at follow-up appointments. Whilst AOAE may overlook auditory neuropathy and mild hearing loss, AABR is also not completely dependable as it primarily detects moderate to profound hearing loss, potentially missing milder

impairments. This highlights the importance of a dual screening approach, combining AOE and AABR to improve detection rates (Kv and Chhina, 2024). Hall (2015) mentions that inconsistency in screening protocols can lead to unreliable results. Through standardisation of these protocols across hospitals can enhance consistency, reduce missed diagnoses, and ensure early intervention for children with hearing impairments.

Early identification of my sister's deafness in both ears, enabled her to receive hearing aids from a very young age. However, we faced challenges as we were discouraged from using British Sign Language (BSL) and to focus on using spoken communication with her. Due to lack of awareness and support in connecting with Deaf social groups, we didn't have the knowledge of the rich and wide Deaf community to help us become more inclusive at the time. This highlights a gap in providing my sister with inclusive communication options for when she didn't wear her hearing aids. Despite these barriers, she did receive support from a speech and language therapist to develop her spoken communication skills and attended a school with a hearing impairment unit, where she formed friendships with other Deaf children. As she progressed through school, she was able to integrate into the Deaf community through a voluntary group that offers social and communication opportunities, including learning BSL and fostering inclusivity with other Deaf children and their families. This opportunity has provided my sister with a sense of belonging and confidence in her identity as a deaf individual, enabling her to become a positive role model for the younger Deaf generation.

Examining Barriers for Deaf Children

Deaf children face many barriers including a lack of awareness surrounding Deafness and Deaf culture. Many individuals, including educators and policymakers, often view Deafness as a disability rather than a linguistic and cultural identity, reinforcing misconceptions and inadequate support (Musau, 2021). These stereotypes, prevent Deaf children from receiving the support they need for inclusion in the community (Leigh, 2009 and Taylor *et al.* 2015). Additionally, the exclusion of Teachers of the Deaf from early development checks limits families and practitioners access to guidance, delaying intervention and limiting access to specialist resources (Deafness Resource Centre, 2023). These delays can lead to communication challenges and emotional isolation, worsening social barriers. Research highlights that Deaf children often experience delayed speech and language development, making it harder for them to express themselves and engage with peers. Without early intervention, these challenges may contribute to social and emotional difficulties reinforcing barriers to inclusion (Lederberg *et al.*, 2014; Gregory, 2017). Early access to language, spoken, signed, or both, is important for cognitive and emotional development. Without timely intervention, Deaf children may struggle with communication and academic progress, increasing the risk of language deprivation and isolation (Spellun *et al.*, 2022). Addressing these barriers requires recognising deafness as a diverse linguistic and cultural identity rather than a disability, ensuring that appropriate resources and adjustments are available to support Deaf children's growth and inclusion (Bedoin, 2019; Leigh & Crowe, 2015).

Although, BSL has been officially recognised as a language since 2003, Deaf children in Wales often face difficulties in accessing it, infringing on their right to inclusive education under Article 28 and their right to learn and use their family's language and culture under Article 30 of the United Nations Convention of the Rights of the Child (UNCRC) (BDA, 2021; Government Communication Service, 2024; Unicef, no date). A significant factor contributing to this issue is the lack of funding for BSL courses for families, with 80% of services in Wales failing to provide financial support, limiting opportunities for inclusive communication (NDCS Cymru, 2023). Without early access to BSL, Deaf children struggle with language acquisition, impacting their cognitive and social development. Furthermore, families may be unaware of available childcare services or often find them inaccessible due to language preferences and geographic constraints, reinforcing existing communication barriers and hindering social inclusion (Hughes and Jones, 2021).

Strategies to Support Deaf Children

One strategy suggested by Welsh Government (2019) is video feedback interventions (VFI), this is one way to support communication between parents and their deaf child. These interventions would involve recording play interactions to improve specific aspects like gaining the child's attention. Using of techniques such as getting down to eye level, improving visual and auditory accessibility, and using attention-getting strategies have been shown to lead to significant benefits (Chilton *et al.* 2023). Guided feedback from specialists helps parents build confidence, improve sensitivity, and enhance child communication and involvement. Studies, such as those by Lam-Cassettari *et al.* (2015), Kamble & Lam-Cassettari (2013), and Wadnerkar Kamble *et al.* (2022), demonstrate that VFIs foster parental sensitivity, emotional availability, and communicative autonomy in prelingual deaf children.

By improving parental communication strategies and focusing on quality interactions, these interventions strengthen parent-child relationships and lay a strong foundation for language and relational development. Systematic reviews underscore the intervention's effectiveness in fostering secure attachment, enhancing parental sensitivity, and supporting child development (Association for Video Interaction Guidance UK, no date; Dodsworth, Kelly, & Bond, 2021). Research further highlights that using VFI can improve communication and relationships, both in family and educational settings (Maxwell & Rees, 2019; Rogers, 2021). Case studies and practical applications demonstrate its role as a relationship-based intervention promoting attunement and empathy (Kennedy, Landor, & Todd, 2011).

However, there are limitations of VFI, as parents may not have access to trained specialists who can support with effective feedback, they might struggle to provide consistency when applying the recommended strategies at home, affecting the impact of the interventions to support the Deaf child and their family. Cultural and personal barriers might prevent parent's comfortability of being recorded leading to reduced participation in VFI. With the emphasis on visual and auditory strategies, families that rely on BSL as their first language may struggle with the support they need to aid and foster their children's development (Robinson, 2020 and Grumi *et al.* 2023).

Conclusion

In conclusion, early identification and intervention is important for supporting Deaf children's development and overcoming communication barriers. Screening tests like the AOA and ABR play a vital role in detecting hearing impairments, but a dual-screening approach and standardized protocols are necessary to improve detection, especially for milder cases. While Deaf children face significant challenges due to societal attitudes, inconsistent access to Deaf culture and BSL, and delays in intervention, strategies like video feedback interventions show promise in enhancing parent-child communication. However, limitations such as access to trained specialists and cultural barriers must be addressed to ensure these interventions are effective. To fully support Deaf children, there is a need to recognise Deafness as a cultural identity and provide inclusive, accessible resources. A collaborative effort across healthcare, education, and communities can help bridge these gaps, ensuring Deaf children can thrive in both their academic and social lives.

Thank you for joining my webinar. I'd now like to open the floor for any questions you may have.

What role does British Sign Language play in fostering inclusivity, and how can access to BSL education be expanded?

BSL fosters inclusivity by bridging communication gaps between Deaf and hearing communities, enhancing children's non-verbal communication skills, empathy, and emotional understanding while empowering those with speech delays, anxiety, or neurodivergent conditions to express themselves confidently (Park, 2025). Integrating BSL into classrooms improves behaviour management, engagement, and accessibility, benefiting both Deaf and hearing children by promoting cognitive development, language skills, and social awareness (Childcare and Education Expo, 2024). The BSL Act (2022) highlights the importance of BSL in promoting equality, inclusivity, and accessibility. It creates opportunities in fields such as education, healthcare, and interpretation, echoing Parks' (2025) findings. A further milestone in BSL education is the development of the BSL GCSE in England, made through Ofqual's recent consultation phase (Ofqual, 2025). BSL serves as a vital communication tool, bridging gaps in multilingual classrooms and ensuring effective interaction during emergencies for Deaf individuals. This supports the Childcare and Education Expo's (2024) statement of its role in fostering inclusivity. Advances in technology, like sign language translation apps, further enhance BSL's utility, contributing to dynamic, inclusive learning environments where all children can thrive (Education North Tyneside, 2025).

What are the most common misconceptions hearing parents have about Deafness?

Hearing parents of deaf children often hold misconceptions that shape their decisions and perceptions. The Equality Act 2010 (UK Government, no date) defines disability as a long-term or substantial loss, which can lead to viewing deafness primarily as a disability rather than as a cultural identity. Some parents believe cochlear implants or hearing aids can fully restore hearing, despite their limitations in replicating natural sound. This belief may lead parents to prioritise integrating their

child into the hearing world, often overlooking the richness of Deaf culture. As a result, children may feel disconnected from both the hearing and Deaf communities (Garraund, 2021; Flaherty, 2015). Representations in the media may also contribute to misconceptions, as deaf individuals may be portrayed as silent or incapable of speech, influencing parental expectations and limits opportunities (Deaf Unity, 2017). Furthermore, communication myths, such as the belief that lip reading is more reliable than BSL or that speaking louder improves understanding, remain prevalent (Schacter, 2020). Misconceptions can extend beyond the child to the parents, who may face emotional and psychological stress due to societal expectations and limited support (Zaidman-Zait, 2016). Some parents may perceive their deaf child as more vulnerable than hearing siblings, driven by unresolved emotions, societal misconceptions, and a lack of knowledge of the Deaf community. This can lead to overprotectiveness rather than fostering independence and confidence (Sealy, McMahon, & Sweller, 2023). Providing education and support can reduce these misconceptions, promoting inclusion and confidence in Deaf individuals.

Thank you for listening to my webinar, I will now hand you over to Bethan.

Thank you all for your insightful webinars on your respective ALNs. Each session has provided fascinating perspectives on identifying and diagnosing different ALN, as well as exploring the barriers individuals face and the strategies needed to support them. Your presentations have been both engaging and thought-provoking, offering valuable insights into these important topics. I appreciate your time and contributions and thank you all for attending.

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AI Acknowledgement

I acknowledge the use of Co-pilot Microsoft 365 (<https://www.office.com/chat>) on 5th April 2025 to summarise an article using the prompts: -

1. Could you please summarise this article
<https://www.sciencedirect.com/science/article/pii/S1098360021010819>

I confirm that I have not presented any AI generated text as my own work. I confirm I have copies of my drafts, notes and other resources I used before, and after the use of AI tools which I may be asked to provide in evidence

I acknowledge the use of Co-pilot Microsoft 365 (<https://www.office.com/chat>) on 29th April 2025 to support my research using the prompts: -

1. Are there any articles that critique The Automated Otoacoustic Emission (AOAE) test and the Automated Auditory Brainstem Response (AABR) systems for testing the hearing of children?
2. Are there any articles that critique The Automated Otoacoustic Emission (AOAE) test and the Automated Auditory Brainstem Response (AABR) systems for testing the hearing of children between 2015 and 2025?

I confirm that I have not presented any AI generated text as my own work. I confirm I have copies of my drafts, notes and other resources I used before, and after the use of AI tools which I may be asked to provide in evidence.

I acknowledge the use of Co-pilot Microsoft 365 (<https://www.office.com/chat>) on 29th April 2025 to summarise an article using the prompts: -

1. Could you please summarise this article
<https://avr.tums.ac.ir/index.php/avr/article/view/15> in regards to the accuracy and limitations of AOAE and AABR?
2. Could you please provide a more in depth summary of the limitations mentioned in the article?
3. Could you elaborate on the study quality concerns?

4. Could you please summarise this article
<https://link.springer.com/article/10.1007/s00405-023-08250-z> regards to the accuracy and limitations of AOA and ABR?
5. Could you please elaborate more on the limitations in this article?
6. Could you please summarise this article
<https://link.springer.com/article/10.1007/s12098-024-05156-4> in regards to the accuracy and limitations of AOA and ABR?

I confirm that I have not presented any AI generated text as my own work. I confirm I have copies of my drafts, notes and other resources I used before, and after the use of AI tools which I may be asked to provide in evidence