

AUDITORY VERBAL^{UK}

Creating a sound future for deaf children



A sound future:

Raising expectations for children with hearing loss

Position Paper

2019

This position paper uses the latest international research to outline the current landscape of paediatric hearing loss. It includes how social policy, hearing technology and early interventions have advanced and are raising the potential for deaf children to learn to listen and speak alongside their hearing peers. Auditory Verbal therapy is a highly specialist family-centred early intervention programme which coaches parents to maximise their child's hearing technology, their child's listening and learning, and subsequently, their child's speech and language development. In this paper we explore the global picture of Auditory Verbal practice, the increasing evidence base and what more can be done to make this intervention accessible to families across the UK.

CONTENTS



Paediatric hearing loss



Auditory Verbal therapy



Family stories



Outcomes



Ava's story



Global picture

For further information about Auditory Verbal therapy or the international research please email sarah.hogan@avuk.org

Paediatric hearing loss

Estimates of the number of children with severe to profound hearing loss in the UK under the age of five years are between 6,400¹ and 7,200², and around 92% of deaf children are born to hearing parents^{3,4}. Without early intervention, this could leave many deaf children without access to either a rich spoken language environment or access to a rich sign language environment, as most hearing parents are not fluent in sign language. There is a continuum of communication approaches available for children who are deaf and they range from the more visual to the most auditory. Parents/caregivers of deaf children should be presented with clear information about these approaches so they are able to make an informed decision about which communication approach they would like for their child.

By the age of three and a half, the human brain has completed 85% of its physical growth, meaning the first three years of life are critical for developing spoken language through listening^{5, 6}. For families wanting their children to communicate using spoken language, this represents a neurological emergency to access meaningful sound.

In the UK there has been substantial investment in the Newborn Hearing Screening Programme (NHSP), with millions of babies having been tested for hearing loss at birth since 2006. There have also been, and continue to be, significant advances in assistive hearing technologies (e.g. digital hearing aids, auditory implants and their supporting technologies). However, amplification alone does not allow for optimal spoken language development⁷, nor does amplification alone support growth in other developmental areas such as social competence⁸.

The NHSP was introduced in the UK on the premise that outcomes for deaf children could be improved by early identification of hearing loss and effective, early intervention⁹. Effective intervention is crucial if we are to benefit from this investment and technology. We now know that excellent outcomes for spoken language can be achieved if children with hearing loss are fitted expertly with the most appropriate technology and if their families are supported with effective early intervention¹⁰.

Deafness is not a learning disability. The majority of children with hearing loss have the potential to reach the same educational outcomes as hearing children, if they have appropriate support. However, if there is a language delay, this can affect both children's literacy and numeracy. A study in 2017 funded by the Nuffield Foundation reported that 48% of oral children aged between 10 and 11 years were reading below age level¹¹. It is of concern that in 2018, 57% of deaf children left primary school having failed to achieve the expected standard at reading, writing and mathematics compared to 26% of children with no identified Special Educational Needs¹². A new Progress 8 measure was introduced in the UK to compare a child's progress between the end of primary and secondary school compared to other children of the same initial ability. Figures show that deaf children are not 'catching up' from their lower starting points as they move through secondary school¹². Furthermore, an early language delay can continue to jeopardise future educational outcomes for children who are deaf. ►



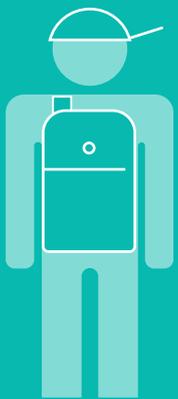
estimated
7,200
deaf children
under the age of
five in the UK

92%

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Children who have hearing loss are also at greater risk of experiencing social isolation, loneliness and difficulty with peer relationships^{13, 14}. This influences social-emotional development and later adult relationships. Early access to language is the decisive factor that drives development forward and provides good social-emotional functioning¹⁵. With over 40% of children with permanent hearing loss estimated to have mental health difficulties in childhood/early adulthood¹⁶, there is a vital place for family-centred, early intervention programmes.



Auditory Verbal therapy

Auditory Verbal therapy was founded on the work of audiologists and practitioners dating back to the late 1930s. It was first coined 'Auditory Verbal' by the Alexander Graham Bell Association for the Deaf in the 1970s in the United States of America.

Optimal development of speech and language skills is preceded by developing optimal listening skills. Listening is dependent upon the stimulation and development of the auditory cortex in the brain. We now know there is a sensitive period during which the central auditory system remains maximally plastic. Effective early intervention needs to occur as early as possible and ideally within the first three and a half years so as to maximise the benefit of optimally fitted hearing technology and to maximise spoken language development¹⁷.

Long-term hearing loss extending beyond the early school-age years without adequate auditory stimulation may result in significant re-organisation of the brain, with areas of the auditory cortex becoming involved in visual processing¹⁸. If parents desire listening and spoken language outcomes for their child with hearing loss, a communication approach that emphasises the development of auditory brain pathways through listening and spoken language is necessary^{4, 19}.

Throughout the first year of life infants learn language in the context of infant-caregiver interactions²⁰. It has also been shown that optimal language acquisition depends upon engaged parents²¹.

By stimulating auditory brain development, Auditory Verbal therapy enables deaf children with hearing aids and/or auditory implants to make sense of the sound relayed by their devices. As a result, children

are better able to develop speech and language skills, laying strong foundations for literacy and numeracy²². Auditory Verbal therapy is delivered by listening and spoken language specialists (LSLS CertAVT®) who have undergone three years of post graduate training and have been certified by the AG Bell Academy – an internationally recognised qualification.

Auditory Verbal therapy sessions are typically one hour and are attended weekly or fortnightly. They include the primary caregivers, the child and the practitioner. Due to the parent coaching focus, Auditory Verbal therapy allows sessions to be adapted to suit a variety of linguistic backgrounds. Understanding and speaking two or more languages is a realistic goal for some young children with hearing loss^{23,24}. Every session is play based and highly functional so that the goals of the session can be easily translated into everyday life. The aim for each session is for the child to have fun whilst caregivers learn strategies to maximise their child's listening and spoken language skills in everyday activities. Sessions can be delivered face to face or via telepractice.

To watch a typical Auditory Verbal journey click on the image below.



Watch at: <https://bit.ly/2Zb72VE>

Zack and Dylan



My twin sons, Zack and Dylan, were born with severe to profound hearing loss in 2011. The day we learnt about their hearing loss we were shocked. We could not believe this could have happened to us.

At one month of age we started AVT and at six months' the twins received their bilateral cochlear implants. We quickly started seeing them make incredible progress; the kids began to understand that they have their own ideas and opinions and they started to talk, ask questions and interact more and more with their peers.

Our therapist helped me to understand there are no limits for deaf children

Zack and Dylan are now seven years old, are thriving at mainstream school and have developed very different personalities. Both love to read but Dylan prefers science and history books while Zack loves learning new jokes. The twins both play chess and a variety of sports.

I want to tell any new parents that AVT was the most important training for our children's brains and to remember that the sky is the limit!

Deborah
Zack and Dylan's mother

Kurran

Kurran was born two months premature and had to spend the first two years of his life in hospital. It felt like there was a constant barrage of bad news every day – 'he's not going to walk', 'his limbs aren't working'. Two years of coping with this and living in a hospital came close to destroying us. Then came the deafness diagnosis. To be honest, I felt helpless for the first time in my life. Hearing aids made no difference and by the age of four, Kurran still hadn't uttered a single comprehensive word. Kurran received a cochlear implant, and I'll never forget the first time he was 'switched on'! His eyes were like a rabbit in the headlights but though he could hear, crucially, he couldn't interpret what the sounds meant.

Discovering AVUK was like finding a huge inflatable balloon full of hope, help and real progress

Every time we went to AVUK, we were inspired and had complete confidence that we were in the safest, expert pair of hands. Mobility was still a huge issue for Kurran. Kurran took his first independent steps at around five years old. This small miracle was now unfolding and he could walk, listen, talk and read! Now aged 15, he is standing upright and walking and talking, a lot. He doesn't stop talking to be honest and he asks so many questions! He's growing at a really fast rate and has all of the normal teenage demands expected. He loves animals and hopes one day to work with pets. We are so proud of him.

Avy
Kurran's father



Outcomes

Effective family-centred early intervention is crucial if we are to benefit from NHS investment in hearing technologies in the UK. We now know that excellent outcomes for spoken language can be achieved if children with hearing loss are fitted expertly with the most appropriate technology and if their families are supported with effective early intervention¹⁰.

In the UK approximately 80% of all children who spend at least two years on the programme at Auditory Verbal UK achieve age-appropriate language^{33, 34} and most attend mainstream school³⁵.

On average, deaf children with additional needs double their rate of language development whilst on the Auditory Verbal UK programme, and one in two reach age-appropriate spoken language at the end of their programme. For children both with and without additional needs the earlier they start the programme, the better the prognosis for language development³³.

It has also been found that 97% of deaf children without additional needs reach or exceed their age-appropriate spoken language level at the end of the Auditory Verbal UK programme³³.

There are reports of associations between spoken language outcomes and both socio-economic status^{36,37} and maternal education³⁸. Indications from AVUK's data suggest that these factors do not influence spoken language outcomes for children participating in its Auditory Verbal programme^{39,40}.

USA and Australia

Research from the USA and Australia shows that children in Auditory Verbal programmes develop spoken language in line with their hearing peers^{25, 26, 27, 28, 29} and progress at the same rate for listening, spoken language, self-esteem, reading and mathematics as a matched group of children with normal hearing³⁰.

Denmark

Research from Denmark demonstrates that children in an Auditory Verbal programme have advanced spoken language skills relative to other children who had received standard early intervention³¹.

Israel

Research from Israel has shown that the grades achieved for Hebrew and Literature were higher for Auditory Verbal graduates than for adolescents and young people with hearing loss who had followed a different communication approach³².

97%

of deaf children without additional needs reach at least age-appropriate spoken language

1 in 2

deaf children with additional and complex needs reach at least age appropriate spoken language

Ava



The outcome for Ava has been miraculous - it sounds dramatic but there is no other word

I clearly remember thinking, 'Please, just let her go to a mainstream school.' That seems strange now; she's in the top third of her class at a top Buckinghamshire Grammar school. She has won merits and distinctions in LAMDA, she plays the piano and the saxophone, she has won national maths awards and a Distinction on the English Speaking Boards.

What I am most proud of are the things that all parents are probably proud of - Ava is extremely sociable and very kind. She is a good listener and is quick to intervene if someone needs her help. I'm proud of how confident she is in most situations, definitely braver than I am when it comes to meeting new people.

Chris and Lauren
Ava's parents

Ava failed the newborn hearing screening and was diagnosed with a profound hearing loss at three weeks of age. It was devastating for us. We were told she would have to rely on sign language and probably wouldn't have normal spoken language or be able to attend a mainstream school. We worried about how Ava would cope in a hearing world, and felt sad that things like listening to music or chatting with someone in a shop would be beyond her reach.

Ava received a cochlear implant in her right ear at age 9 months and in her left at 14 months. She started responding to sound within a few weeks.

Auditory Verbal UK completely transformed our experience with our daughter's deafness. Our AV therapist said, "What are your dreams for your daughter?" and then told us that, with the right technology and therapy, they were completely achievable. And she couldn't have been more correct.

To go from being unable to hear a jet engine taking off next to you to learning Mandarin is unbelievable, and AVUK was a huge part of that.



The global picture

The international evidence in this position paper demonstrates that deaf children in the UK could greatly benefit from making Auditory Verbal therapy more widely accessible through investment in the NHS and local authority sensory services workforce.

Auditory Verbal therapy is government funded and available for children with hearing loss in Australia, New Zealand and Denmark and is a mainstream approach in North America for teaching deaf children to listen, speak, and to achieve good long-term social and educational outcomes⁴¹.

The spoken language outcomes of these international programmes have been replicated in the UK at Auditory Verbal UK^{33, 34, 35}. However, there are only 23 Auditory Verbal therapists in the UK as of February 2019. With full caseloads, these UK-based therapists can only provide therapy for less than 5% of the deaf children under 5 years old in the UK.

In 2019 the National Institute for Health and Care Excellence put forward new guidance for cochlear implant candidacy criteria. The guidance promotes babies being screened within one month; referred for hearing aids within two months and referred for cochlear implantation within a year. If we are to benefit from the investment into effective early amplification, the current workforce should be equipped to give parents and carers the techniques and strategies they need to maximise the potential of their child's hearing technology and their listening and learning skills.

Auditory Verbal UK provides training for speech and language therapists, audiologists and teachers of the deaf who wish to train in Auditory Verbal practice and supports the ongoing development of practitioners in the UK.

To watch Auditory Verbal therapy providers from around the world talking about provision in their countries, [click here](#).
Or visit: <https://bit.ly/2lqRl65>



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