

# Cued Speech and cochlear implantation



Complete spoken language  
through vision

## Information Sheet 5a

### A Perfect partnership

Cued Speech clarifies all the sounds of spoken language visually and in the time of normal speech. Cues make available all the linguistic building blocks of spoken language, and thus reinforce patterns of aural language.

The use of Cued Speech in the home and at school enables deaf children to acquire a complete understanding of full spoken language.

Research shows that "children receiving Cued Speech surpass the majority of signing and oral children in verbal language skills", (details overleaf).

**Because this understanding is sound-based it is uniquely beneficial for deaf children both pre- and post-cochlear implant.**

Reproduced here are summaries of French and American research and some very informal reports. To start, part of a chatty e-mail from the USA from Speech and Language Therapist, Alina Mills:

***"Not only have I found Cued Speech and cochlear implants to be a winning team together, but the kids who have had both tools have had the highest language skills of all the profoundly deaf children that I have met.***

*One little girl after 2½ years with Cued Speech and 1½ years with an implant*

*scored at the 70 percentile compared to HEARING peers on receptive language (Pre-school Language Scale 3, US Version). Her receptive and expressive vocabulary scores were within the average range compared to hearing peers.*

*A little boy I worked with produced long words with accurate syllables - "helicopter", "alligator" - pre-implant and he quickly acquired improved auditory perception and speech skills post-implant. I believe that the visual modelling of syllables by Cued Speech was important in the development of these skills. Within three weeks with his implant he started using 's' spontaneously. Although he had not heard the 's' pre-implant he had the opportunity to see a visual representation of the sound with the cue.*

*The most phenomenal aspect was that I could turn off my voice, cue a word and both children could voice the word accurately. It was so easy to introduce new vocabulary. The implant gave great auditory stimuli and the cueing gave visual stimuli that could be matched. I have lots of additional examples for you....." Alina Mills MS CCC/SLP*

Alina was, until recently, working as a Speech and Language Therapist in the UK and would be very happy to be contacted by parents and professionals about her experiences. She can be contacted via the Cued Speech Association UK.

*Cued Speech is a simple sound-based system comprising eight handshapes used in four positions near the mouth together with the lip patterns of normal speech so as to make all the sounds of spoken language fully comprehensible to deaf babies, children and adults*

### More information?

Video, booklet and more information sheets available.

### Learn to Cue

Regular courses (some residential) are arranged, with low cost or free tuition.

### Contact us at:

**Cued Speech Association UK**  
Tel, voice and text: 01803 832 784  
Fax: 01803 835 311  
E-mail: [info@cuedspeech.co.uk](mailto:info@cuedspeech.co.uk)  
Web: [www.cuedspeech.co.uk](http://www.cuedspeech.co.uk)

**Call an experienced user now to discuss the benefits of Cued Speech**

## Research into profoundly deaf children's English language comprehension and expression

Marilyn Peterson, on the basis of research data on 36 children 5 to 11 years old, stated:

**"It is very apparent to me that children receiving Cued Speech surpass the majority of signing and oral children in verbal language skills."**

**Marilyn Bourne Peterson, M.A., deaf educator/speech therapist at the Houston Ear Research Foundation for three years, tested more than 75 profoundly deaf children for the cochlear implant center where she worked.** She compiled data on a subgroup (36 children who were in the age range of 5 to 11 years) based on the results of three tests that measure proficiency with the American-English language. These included an informal question test, the Maryland Syntax Evaluation Instrument (MSEI), and the Expressive One Word Picture Vocabulary Test (EOWPVT). She tabulated the results for those children who met the following criteria on at

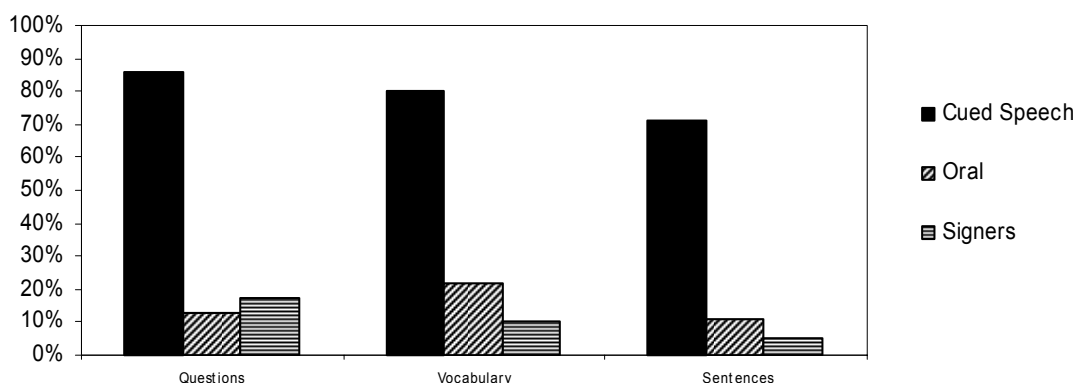
least one of the three measures, children who:

- 1 Answered the question forms with at least 85% accuracy.
- 2 Formulated at least six perfect sentences (of 10 possible) on the MSEI.
- 3 Achieved at least the 20<sup>th</sup> percentile on the EOWPVT.

Of the 36 children whose scores Ms. Peterson used, 20 customarily received some form of signed English (most SEE-2), seven Cued Speech, and nine the speechreading (oral/aural) approach. Since the EOWPVT was normalized on children through 11 years old, older children were not included in this study. Ms. Peterson's findings:

- 1 Most of the children receiving cues did well on all three tests.
- 2 Only 12 of the 36 children had at least one "high" score.

Three of twenty signers, six of seven cuers, and three of nine oral children met the criterion level for at least one of the three test measures:



Question Test	EOWPVT (Vocabulary)	MSEI (Sentences)
6/7 (86%) of the cuers	4/5 (80%) of cuers	5/7 (71%) of cuers
1/8 (13%) of oral	2/9 (22%) of oral	1/9 (11%) of oral
3/18 (17%) of signers	2/20 (10%) of signers	1/20 (5%) of signers

## Case Study - Alexandra's Story - Southern England

Alexandra's mother, Katherine, writes:

"Alexandra's profound sensorineural deafness was diagnosed at 11 months, and after she was fitted with hearing aids, we were encouraged by local professional optimism that she should be able to communicate orally if we followed their advice. At two years of age she was considered to be doing very well. She could identify about 150 individual words which had been laboriously taught to her. However she appeared to understand nothing spoken to her in sentences and her behaviour was very volatile. An Educational Psychologist assessed her as having a social awareness of eleven months.

We discovered Cued Speech by accident. The method seemed thoroughly logical and the anecdotal evidence offered renewed hope to prospects which were looking increasingly bleak. The principles of cueing were relatively easy to learn although it took at least 4 months before sufficient fluency was gained to make it possible to cue everything. Alexandra's progress was remarkable. Within 3 months she had doubled her vocabulary, and after around 8 months she said her first sentence: "Mummy got a yellow coat".

**Cued Speech saved our sanity in the early stages: it produced quickly the developments in understanding which professionals were aiming at over a longer period.**

However, although her knowledge of English was increasing rapidly with cueing, her articulation remained so poor that her speech was incomprehensible to people outside the family (Alexandra has never tried to cue herself.) As a result, she has been reluctant to talk in front of other people. Her inability to perceive sound also continued to frustrate us as it seemed to contribute to her insensitivity to the feelings of those around her. We were delighted therefore when she was able to have a cochlear implant at 4 1/2 years old.

We have always felt that the foundations of language were laid by Cued Speech, but that cochlear implantation finally opened the door

to communication. Prior to the implant, professionals had recognised that her receptive language with Cued Speech appeared to be age appropriate and questions were raised as to whether Alexandra might have become so dependent on this form of communication that she might experience difficulty in adjusting. In fact, the transition from cueing to fully oral communication happened completely smoothly. After as little as three months, the clarity of her speech improved significantly and other people started to understand her. **Cued Speech continued to be valuable in language acquisition for some months to come, reinforcing the links between the language she knew visually and the new sounds she was hearing. Even now it is still invaluable in noisy situations, when the implant is not in use, and in breaking down the sounds in words which hearing children also find difficult!**

It is now 4 1/2 years since we learned how to Cue and 2 1/2 years since Alexandra received her cochlear implant. Her progress has been everything we could have hoped for. Her reading age and vocabulary are both above her chronological age and her personality has become more settled. Deafness has ceased to be an insurmountable problem. The only regrets we have are that she didn't receive the benefits of Cued Speech and her cochlear implant much earlier." 2001

**At Alexandra's 12 month post implant assessment her Teacher of the Deaf, Bill Clark, wrote:**

'In my 30 years experience of working with profoundly deaf children, I have never witnessed the remarkable progress that Alexandra and her parents have made throughout this year, following implant. In my opinion, Alexandra is a little girl who is now totally oral/aural, in her ability to develop speech and language, and shows listening levels which one would not normally anticipate until at least two or three years of wearing her processor'.

*Reproduced with the kind permission of Katherine Ruddick and Bill Clark.*

## French Research into Cochlear Implantation

**In *Cued Speech in the Stimulation of Communication: An Advantage in Cochlear Implantation* Ch. Descourtieux, V. Groh, A. Rusterholtz, I. Simoulin and D. Busquet (Paris) make the following points:**

“Cued Speech facilitates oral communication and permits the deaf child access to a fully structured linguistic model. This notion of model is fundamental: it implies the child’s capacity to memorize linguistic elements in their correct form (lexical and syntactic).

In the very principles of its conception, Cued Speech renders visible the syllabic organization of our linguistic system. Several recent studies emphasize the importance of the syllable as the basic unit of speech, perceived even by hearing babies as early as 3 – 4 months. A deaf baby who receives Cued Speech develops this skill as well. Little by little, he attaches meaning to the hand configurations and even reproduces some of these cues to name and evoke things. In the same way, the child develops a stock of vocabulary words.

Recent work by the Belgian team of Alegria, Leybaert, Charlier, Hage emphasizes the importance of phonological representations which appear to play, in the case of hearing children, a large role in the acquisition of reading skills. Cued Speech completes the partial representations which deaf children receive from lipreading.”

The researchers describe some specific strategies, using Cued Speech, which favour children’s access to phonology. They also present some case studies by way of example, before concluding:

“At the present moment, many teams are noting that congenitally profoundly deaf children who receive early implants rapidly develop an efficient auditory perception of environmental sounds but progress more slowly as a rule in the domain of speech. The development of deaf children who have received Cued Speech intensively disproves these findings, insofar as analysis of speech is concerned.

In fact, the result obtained from our population suggest that:

The more the young child has developed oral communication by the visual channel (Cued Speech) prior to implantation, the more analysis of phonetic and linguistic elements by auditory means will occur rapidly after implantation.

Additionally, if linguistic acquisitions have been limited or even non-existent prior to implantation, it is indispensable and efficient to continue to have recourse to the visual channel (Cued Speech) in association with the auditory channel in order to build phonological representations and to develop oral language.

For these reasons, Cued Speech remains, for us, a beneficial tool in implant habilitation, facilitating speech perception by the auditory channel on the part of early-implanted, congenitally deaf children.”

Reprinted from *The International Journal of Pediatric Otorhinolaryngology*, Volume No.47 (1999); Ch. Descourtieux, V. Groh, A. Rusterholtz, I. Simoulin, D. Busquet, “Cued speech in the stimulation of communication: an advantage in cochlear implantation”; Pages 205-207, Copyright 1999, with permission from Elsevier Science.

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