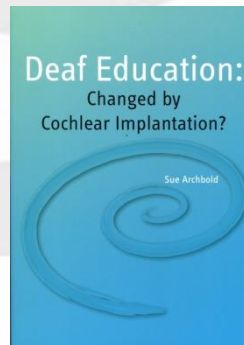


The Ear
Foundation



Deaf Education: changed by cochlear implantation?



Arguments in deaf education have raged over hundreds of years..

- ◆ About how to overcome the effects of deafness and to develop spoken language if you couldn't hear it
- ◆with a lot of passion, but....
- ◆ With little evidence-base
- ◆ Teachers are rarely researchers and...
- ◆ Researchers who came into my classroom rarely understood what was really happening and their research reports didn't reflect reality
- ◆ Or take account of the many variables influencing progress in these children

But.... While teachers were still arguing...

- ◆ Surgeons and scientists were developing cochlear implants
- ◆ Cochlear implants: surgically implanted devices which directly stimulate the auditory nerve, bypassing the damaged cochlea
- ◆ Providing access to speech sounds across all the speech frequencies for the first time for profoundly and totally deaf children



This provoked a furore:



“now that we can cure deafness.....”

“ we don’t need deaf schools any more”

“This is the end of sign language.”

“no child I taught would ever have an implant”

“these children need sign language.”

“ I haven’t time to support a child with an implant”

“he’s had an implant – he doesn’t need support...”

What has this to do with deaf education? Can deaf education keep up with the speed of change?



Parents' views of educational services

- ◆ Sach and Whynes, 2006: education emerged as the major issue – and as a “fight” for services
- ◆ Anything changed?



Training for teachers...: parental quotes....

- ◆ *“Need to realize that ci is not a quick “fix” and the children still need support in whatever educational provision they are in whether signing or oral, mainstream or special”*
- ◆ *“Most day to day support is from parents and teachers – they need to be well informed”*

Special school or mainstream?

- ◆ More children with cochlear implants are going to mainstream schools when compared with those with hearing aids, and fewer to schools for the deaf (Archbold et al, 2002, Int Jnl Aud)
- ◆ But.. These were young children...what as they get older?
- ◆ What about the challenges of high school education?
- ◆ Anecdotal evidence suggesting they are going back to special schools in adolescence...why?

Outcomes from early implantation

- ◆ **Communication skills comparable to that of hearing peers (Tait et al, 2007)**
- ◆ **Spoken language growth comparable to that of hearing peers (Dettman, 2007; Ching, 2008)**
- ◆ **Age at implantation..... significant predictor....**
- ◆ **Butit's complicated...**
- ◆ **HUGE variability as indicated by review of Marschark , (2007)**

Educational outcomes following implantation.....

- ◆ *Stacey et al 2006 : 2853 children – 468 with implants : improvements in educational attainments, compared with those with hearing aids*
- ◆ *Thoutenhoofd, 2006 : Scottish data to show children with implants outperformed those with hearing aids, particularly in maths, but not as well as hearing peers...*
- ◆ *Vermeulen et al (2007): reading levels better than hearing aided children not as good as hearing peers*
- ◆ *Damen et al, 2006,2007, 2008: children with implants did less well than hearing children in mainstream schools on subtle communication skills – similar results to Mukari et al*

Implants and Reading....

◆ Geers (2003)

- ▶ Large numbers of 8-9 year olds implanted before 5 years
- ▶ Reading levels within the normal range..



◆ Geers (2008)

- ▶ When tested again at 15/16 years of age – significant numbers had not progressed....**HUGE VARIABILITY**
- ▶ **Conclusions:** Early cochlear implantation had a long-term positive impact on auditory and verbal development, but did not result in age-appropriate reading levels in high school for the majority of students. **Why? What can we DO?**

What do we know.....

- ◆ Cochlear implantation has improved reading outcomes in children in comparison with those with hearing aids (Archbold et al, 2008)
- ◆ Those implanted earlier are likely to have better reading skills than those implanted later
- ◆ Developing good early communication and phonological skills is likely to promote better reading skills
- ◆ Early story telling promotes reading skills
- ◆ Speech reading is helpful to promoting reading skills

What we do not know...

- ◆ What reading skills need to be taught in the long-term, particularly at high school or how to do it
- ◆ What strategies children with implants develop and/or need to be taught in high school to continue developing reading skills
- ◆ These children with implants are not learning as deaf children in the past, but nor as hearing children....
- ◆ We need research into how these children are learning in mainstream schools, to ensure that we know what they need – and provide it. **Currently we are not.**

Teenagers talking....life in school (The Ear Foundation educational study with RNID)

- ◆ *“I need one person at a time, just one person at a time not all the same time, whoo, over my head, I lose control. It is quite hard to work...other people talk too fast, then walk off”*
- ◆ *Mainstream student (14)*

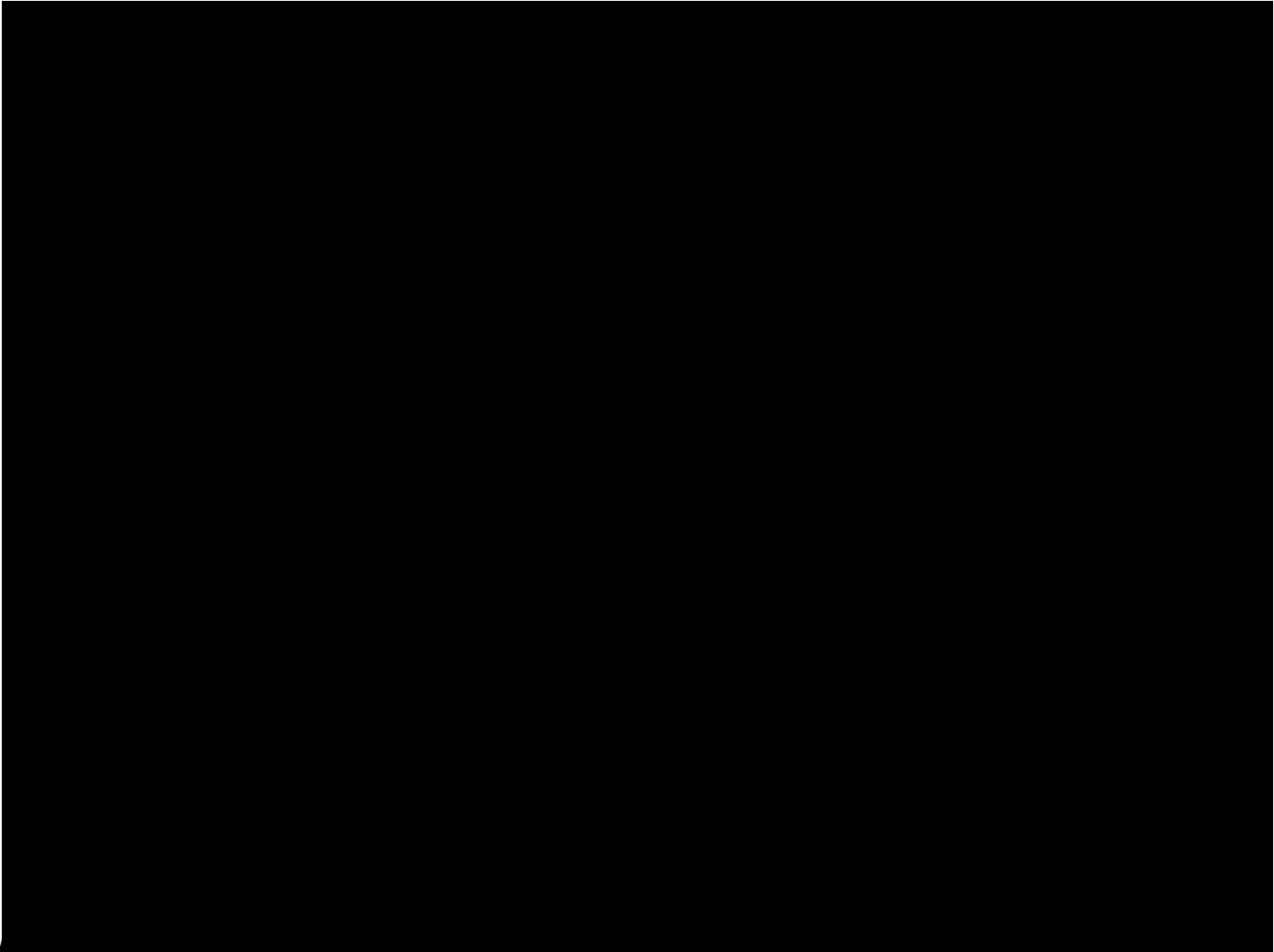


Pupil talking....life in school

- ◆ *“Group work is the biggest pain you could ever possibly imagine. Small group is all right but big group or class discussions they are the worst.”
Mainstream student, 14*



One boy talking.....at school?



With two implants....?

- ◆ Our current research with young people with a sequential bilateral implant suggests some difficulty in adjusting to the second implant
- ◆ Little support offered to them after the second implant
- ◆ Need for co-operation between cochlear implant centre and teachers of deaf
- ◆ But all would recommend it to another!

Deaf education – changed?

- ◆ Yes---
- ◆ And no!
- ◆ “new developments ensure that their educational needs are even more diverse and complex” *Leigh, Marschark, 2008*

The challenges for deaf education are more complex than we expected:

- ◆ The majority of children are not functioning as profoundly deaf children did in the past
- ◆ They are now being benchmarked with their hearing peers.....many sound like hearing children **but** their excellent speech may mask their real language levels
- ◆ Neither are this group functioning as hearing children: they have subtle educational needs
- ◆ **AND**, we also have those who don't do as well as expected for a range of reasons – up to 40% with other difficulties...

Deaf Education needs to change to provide:

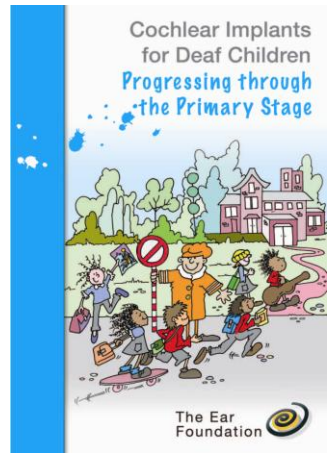
- ◆ Flexible support for this more varied population and their families over time..
- ◆ The skills to monitor subtle changes in progress over time and identify other difficulties present
- ◆ Effective, trained support in mainstream schools particularly at high school
- ◆ The management of complex, changing technology in a busy educational environment
- ◆ Peer-group support for the psycho-social needs of the increasing numbers of those in mainstream provision

To do this, we need:

- ◆ Liaison between cochlear implant specialists and local educational provision
- ◆ To bring together educators, researchers and parents/users to explore:
 - ▶ The process of learning for these children
 - ▶ The educational support they want and need
- ◆ To change teacher of the deaf training....
 - ▶ So we can apply what we learn and provide what is needed for this new group of deaf children

Resources to help.....

- ◆ NDCS materials – eg Here to Learn DVD
- ◆ NDCS support available see Brian and Jo....
- ◆ Phonics Guidance – with BATOD, NDCS, Ewing Foundation
- ◆ The Ear Foundation Sounding Board
- ◆ The Ear Foundation materials eg Primary schools, Education programme...



Deaf education: changed by cochlear implantation? YES: we know:

In a comparatively short time, compared with the long history of deaf education, cochlear implants have gone from controversy to routine provision.....

What we have just shown is already

- ◆ Out of date and historical information
- ◆ The young children with bilateral implants today are different.....what does the future hold for them?
- ◆ We have a whole new generation of deaf children, young people and adults....
- ◆ Who are functioning neither like profoundly deaf of the past nor like hearing children.....
- ◆ ***“I’m deaf but I hear with my implant”***
- ◆ ***We need your help to ensure we know what they need – and fight for it....***

A young child with curly, light brown hair is seen from behind, looking out a window. The child is wearing a cochlear implant on their left ear. The window looks out onto a lush green garden with various plants and a wooden fence. The child is wearing a purple and white striped shirt.

To ensure we can maximise the benefits of cochlear implants for deaf children today