Speech production and speech production accuracy in children with cochlear implants and their normally hearing peers

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The longitudinal phonological development of children with cochlear implants (CI) is compared to that of normally hearing (NH) peers. This presentation aims to conclude on one general question: “are children with CI able to catch up on their NH peers?” The spontaneous speech productions of children with CI are investigated both at the word level for accuracy and variability and at the segmental level with respect to consonant clusters and fricatives.

In comparison to NH peers, children with CI’s word and segmental productions are less accurate and more variable. Moreover, the characteristics of the target word (syllable length, complexity and frequency in child-directed speech) affect children with CI’s word productions to a different extent than those of NH children. Target words that have more syllables and are more complex are less accurate and more variable in both groups of children, but the effect is more pronounced in children with CI.

In contrast, target words that are more frequent in child-directed speech are more accurate, but this effect is less pronounced in children with CI. But, for all these measures, a catch up is found: children with CI reach similar levels of phonological development as their NH age-mates by age five.