Little tips might help:

Typical aided performance of Mandarin phoneme and narrowband noise

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Introduction: Obtaining hearing threshold across frequencies is necessary for the evaluation of hearing aid benefit. However, completing a whole set of audiologic assessment in children is often challenging due to the lack of attention. We therefore aimed to develop two clinical tools, Mandarin Phoneme Detection Score Sheet and Reference of Typical Aided Narrowband Noise Performance, to help audiologists determine whether children’s hearing aid is fitted adequately.

Methods: To investigate the typical aided performance of children with hearing loss in detecting Mandarin phonemes and narrowband noise (NBN), 10 participants per each hearing level were recruited, yielding 30 participants. The aided threshold ranges of detecting Mandarin phonemes and NBN were measured by 95% confidence interval. Stepwise Regression was conducted to identify which Mandarin phonemes were accurate predictors of NBN detection performance.

Results: Regression results revealed that the detection threshold of /ə/ predicts the aided thresholds of 250 and 500 Hz, while /a/ predicts that of 1000 Hz, 2000 Hz and 4000 Hz, and /tɕʰ, s/ predicts that of 6000 Hz. The average performance of children with different hearing level in detecting NBN showed that the typical aided hearing thresholds for mild hearing loss ranged between 15-25 dB HL, those for moderately-severe and severe hearing loss ranged between 25-30 and 25-40 dB HL, respectively.

Conclusion: While the Mandarin Phoneme Detection Score Sheet is useful for pediatric audiologists when no reliable NBN results are obtained, the Reference of Typical Aided Narrowband Noise Performance can serve as a tool for evaluating hearing aid performance.