Analyses of variance were conducted on the modeled outputs for soft, average and loud inputs, at the fitting target selected for the fitting. For each device, characteristics and comparisons with other procedures.

Methods

Peak frequency response data and audiometric data were extracted from unique devices that were acquired for inspection or repair over a three week period. Audiometric thresholds data for the 0.125, 0.5, 1, 2, 4, 6, 8 and 10 kHz frequencies were extracted from three groups of 150 devices. All devices included in the analysis had been used in a real-world setting and were not removed from service. For each device, two data sets were extracted: one for each target used in the study (0.125, 0.5, 1, 2, 4, 6, 8 and 10 kHz).

Results

The four most commonly identified audiophones from the cluster analysis are presented in figure 1. For each device, the peak frequency response was compared to the target frequency response, calculated for each device as a function of the fitting target selected for the fitting, using the standard ISO 226:2003 (ISO-I) algorithm. These data are represented in the audiometric frequencies. 1, 2, 4, 8 kHz in Figure 2, 3, 4, 5.

Background

Keller and Dilley (2005) demonstrated that individuals with NHM exhibit varying preference for loudness, with the preference for loudness varying based on the severity of the audiogram. This study, however, looked only at overall loudness, and we have speculated that the preference for loudness varies with the frequency range over which the loudness is achieved after modification to the fitting.

Discussion

Prescription fitting targets are intended as an automatic threshold-based starting point for hearing aid fitting.

Each fitting target is based on varying assumptions and goals, including, but not limited to, optimizing loudness of speech level inputs, maximizing the speech intelligibility index, normalizing the loudness profile, and customizing the response to the patient's personal preference. Each fitting target also has varying assumptions and goals.

These starting points differ in output levels and shaping across acoustic.-level inputs, but are intended to serve as an aid for use in generating a personalized final setting for each device. The goal of each fitting target is to achieve a similar response in the high frequencies. For loud input levels, changes from the prescription become more significant than in other audiograms, but not to the degree of lower output levels.

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