

# HANCOCK COUNTY SCHOOLS

## Hearing-Middle Ear Screening and Referral Guidelines

### Pure Tone Screening

1. Frequencies and Intensity Levels: **1kHz @ 20dB, 2kHz @ 20dB, 4kHz @ 25dB** (ASHA's standards). If necessary, start with a 40 or 50 dB tone so the child becomes familiar with a stimulus tone.
2. If the child fails to respond at any frequency in either ear, rescreen immediately. (Immediate pure tone rescreening has been found to eliminate up to 50% of initial failures!)
  - a. Remove the headphones and reinstruct the child, telling them to respond "even if they just think they hear the tone."
  - b. Replace the headphones, making sure that they fit properly and are directly over the ears, and rescreen ear(s) and/or frequency(ies) in question.
  - c. Refer to an audiologist if the child still fails one or more frequencies in either or both ears.

### Middle Ear Screening

1. **Norms: Normal TM Compliance (Peak Height) range = 0.2-1.8; Normal Middle Ear Pressure (MEP) = between -200 and +200; Normal Physical Volume for children = 0.2-2.5**
2. **TM Compliance:** If the child shows a "flat" tympanogram (Compliance less than 0.2), remove the ear probe and immediately rescreen that ear, being sure the probe is not pushing against the ear canal wall. If the tympanogram is still flat and if the child does not have tympanostomy tubes (which would also result in a large PV), then refer to a physician. If the compliance is excessive (>1.8) then immediately rescreen that ear. If the same result occurs, then refer the child to a physician, as this rare result could indicate an abnormal ossicular chain condition ("too loose" of a system).
3. **ME Pressure:** If the child shows a normal TM Compliance peak (0.2-1.8), but an abnormally negative MEP (below -200), (a normally-looking peak is shifted too far to the left), a recheck may be recommended and should be conducted within 6 weeks. Upon recheck, if the negative MEP increases, then refer to a physician. If the negative MEP is still abnormal but is decreasing, as compared to the previous screening, then a condition may be resolving on its own. Recheck again within a couple of weeks. If the MEP is WNL (above -200), then pass.
4. **Ear Canal Physical Volume:** If the child shows an abnormally large PV (2.5 or greater), then rescreen the ear, assuring that a proper probe seal has been maintained. If the PV is still large, either an ear tube is present or there is a perforated TM. To verify if a tube is present, check current health records or call the parent. Do not rely on information reported by the child! If a tube is verified, then pass. If a tube cannot be verified, refer to a physician immediately. If PV is abnormally small (less than 0.2), then rescreen the ear, assuring that the probe was not pressing against the ear canal wall. If PV is still small, refer to a physician immediately, as this may indicate an ear canal problem (e.g., cerumen impaction, foreign object present, ear canal deformity).