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## Standard Audiological Assessment

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*This standard covers the procedures to be used to assess and monitor a client's hearing status and specifically test the status of the peripheral auditory system, which comprises the outer, middle and inner ear.*

### Expected Outcomes

- Standard audiological assessment is conducted to quantify and qualify, by site of lesion, peripheral hearing loss on the basis of behavioral or objective responses to acoustic stimuli.
- Assessment may result in recommendations for further audiological assessment, rehabilitative assessment, medical/educational referral, hearing aid/sensory aid assessment, hearing rehabilitation and counselling, speech or language assessment, or tinnitus assessment and rehabilitation.
- Clients/patients with identified hearing loss receive follow-up services to monitor audiological status and to enable appropriate management decisions.

### Clinical Indications

- Individuals of all ages are assessed when a hearing loss or auditory processing disorder is suspected.
- Standard audiological assessment is prompted by referral, self-referral or referral from a screening programme.
- When standard audiological assessment cannot be completed, where possible, objective procedures should be employed, including auditory evoked potentials.

### Clinical Process

- A case history is obtained, otoscopic evaluation performed and if necessary cerumen management is carried out by an appropriately trained professional prior to any audiological testing.
- The case history should include the impact of the hearing loss on the clients daily life ( See history taking, counselling and rehabilitation standards)
- The assessment should invoke the 'cross-check principle' to check the consistency of results and aid in the interpretation of the results in relation to the case history.

Assessment may include:

- Air-conduction and bone-conduction pure tone threshold measures (with appropriate masking) carried out using calibrated stimuli delivered through transducers such as headphones, insert phones or loudspeakers. Age appropriate audiometric threshold seeking procedures must be used.
- Age appropriate speech perception testing with appropriate masking.
- Tympanometry and acoustic reflexes.
- Auditory evoked potentials (when traditional audiometric techniques cannot be employed or results are unreliable).
- Otoacoustic emissions.
- Recently documented and validated measurement procedures.



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### Setting/Equipment Specifications

- The audiometric test equipment, technique and calibration of equipment and rooms must comply with ISO and IEC technical and procedural standards for the procedure used. Where no standards exist, manufacturers' specifications can be consulted. Refer to NZAS Calibration Standard for further detail.
- Speech testing stimuli should be appropriate for New Zealand accents and lexicon when such information is available.

### Documentation

Documentation addresses identifying information, pertinent background information, interpretation of test results and the type and severity of the hearing loss and associated conditions or disabilities and specific recommendations. Recommendations should address the need for further assessment, follow-up or referral.

### Related References

- ISO/DIS 389–1:1998 Acoustics. Reference zero for the calibration of audiometric equipment— Part 1: Reference equivalent threshold sound pressure levels for pure tones and supra-aural earphones. (
- ISO 389–3:1994 Acoustics. Reference zero for the calibration of audiometric equipment— Part 3: Reference equivalent threshold force levels for pure tones and bone vibrators.
- ISO 389–2:1994 Acoustics. Reference zero for the calibration of audiometric equipment— Part 2: Reference equivalent threshold sound pressure levels for pure tones and insert earphones.
- ISO 389–4:1994 Acoustics. Reference zero for the calibration of audiometric equipment— Part 4: Reference levels for narrow-band masking noise.
- ISO 389-7: 1996 Acoustics. Reference zero for the calibration of audiometric equipment – Part 7: Reference threshold of hearing under free-field and diffuse-field listening conditions
- ISO 6189:1983 Acoustics. Pure tone air conduction threshold audiometry for hearing conservation purposes.
- ISO 8253-2: 1992 Acoustics – Audiometric Test Methods – Part 2: Sound field Audiometry with pure tone and narrow band test signals.
- IEC 60645–1:1992 Audiometers—Part 1: Pure-tone audiometers.
- IEC 60645–2:1993 Audiometers—Part 2: Equipment for speech Audiometry.
- IEC 60645–3:1994 Audiometers—Part 3: Auditory test signals of short duration for audiometric and neuro-otological purposes.
- IEC 61027:1991 Instruments for the measurement of aural acoustic

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- impedance/admittance.
- ANSI S3.1 - 1991 American National Standard Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms
  - New Zealand Audiological Society Standard, 'Counselling Standard'. 2007 , [www.audiology.org.nz](http://www.audiology.org.nz)
  - New Zealand Audiological Society Standard, 'Hearing Rehabilitation' 2007 [www.audiology.org.nz](http://www.audiology.org.nz)