Assistant Audiologist Workshop

BAA Conference 20th-21st November 2014

Paediatric Audiology
Types of childhood hearing loss

Congenital
- e.g. genetic, syndromes, environmental

Acquired later in childhood
- Temporary e.g.: ‘glue ear’, ear infection
- Permanent e.g.: progressive loss, infection, medication, head trauma
Who do we see?

New hearing assessment referrals

- Referrals from GP, Health Visitor, Ear, Nose & Throat, Speech & Language Therapy
- School screen fail
- Newborn screen follow up
- After illness/injury

Monitoring hearing

- During medical treatment (e.g. chemotherapy)
- For conditions/syndromes associated with hearing loss

Hearing aided children

- Permanent hearing losses
- Temporary hearing losses
Role of the assistant

Assistant Audiologist

- Admin / clerical
- Hearing testing
- Hearing aids
- Screening (school entry/neonatal)
- Other
Hearing testing in children

- How to test?
  - Depends on developmental age of child

- Approximate age ranges for tests:
  - 0-6 months: Newborn screening, ABR, OAEs
  - 6-18 months: distraction test
  - 6-30 months: visual reinforcement audiometry (VRA)
  - 24 months – 3.5 years: performance testing
  - > 3.5 years: play audiometry, PTA

- Limited attention span – prioritise test procedure to obtain most important information
Distraction test  (6-18 months)

- Suitable for infants with good head control
- Works on the principle that a child of this age will turn to sound if suitably free from distraction
- 2 tester team: Tester 1 (main tester) and Tester 2 (assistant role)
- Tester 1 sits in front of child, maintaining their attention using simple play activity
- Tester 2 is positioned behind the parent & child and is responsible for presenting stimuli
Room set-up: bird’s eye view

Tester 1

Tester 2

Parent

Child

Toys on table

Table with sound level meter & results sheet
Distraction test: role of the assistant

- Present the auditory stimuli when cued (when Tester 1 phases out the play activity)
- Vary the stimulus, sound level, side of presentation as instructed by Tester 1
- Reward the child if their response is deemed valid
- Measure and record the results
Potential pit-falls

Visual cues: Being seen by child, shadows, reflections

Auditory cues: footsteps, rustling

Tactile cues: vibrations, air currents

Smell cues: perfume, hygiene (!)
Visual reinforcement audiometry (VRA) (6-30 months)

- Requires infant has good head control
- Tester 1 and Tester 2
- Tester 1 controls test stimuli, often in separate observation room
- Tester 2 sits in front of the child, maintaining their attention using simple play activity
- Stimuli are presented from speakers either side of the child (or via insert earphones)
- If the child turns to the sound a ‘visual reinforcement’ (usually an animated toy) lights up to reward them
- Child needs to link hearing the sound with seeing the reward
Room set-up: *bird’s eye view*

- **Tester 1**
- **Tester 2**
- **Parent**
- **Child**
- **Speakers and rewards**
- **Observation room**
VRA: role of the assistant

- Maintain play activity throughout test
  - minimum necessary play to keep child alert and facing forward
  - change toys as necessary to maintain attention
  - keep play activity quiet
  - *don’t change play activity with stimulus presentation* - this could serve as a cue

- Praise child for correct head turns – don’t reward false turns/‘checking’

- Monitor child & parents
Hearing aids for children

- Types of aid:
  - Behind-the-ear, In-the-ear
  - Bone conduction headband/softband
  - Bone anchored hearing aid
  - Cochlear implant

- Paediatric features may include:
  - Indicator lights for parents
  - Tamper proof battery drawers
  - Volume control/program button disabled
  - Accessories e.g. clips to attach aids to clothes
Role of the assistant?

- Impression taking and mould re-tubing
- Hearing aid repairs & basic repairs of CI or BAHA
- Assisting in fitting and verification of hearing aids
- Support and advice for children & parents e.g. encouraging aid usage, aid controls, cleaning, changing batteries, troubleshooting
- Provision of assistive listening devices e.g. FM systems, alarm clocks, phones
Further information

- [www.ndcs.org.uk](http://www.ndcs.org.uk) National Deaf Children’s Society (NDCS)
- [www.hearing.screening.nhs.uk](http://www.hearing.screening.nhs.uk) Newborn Hearing Screening Programme (NHSP)
- [www.thebsa.org.uk](http://www.thebsa.org.uk) British Society of Audiology (BSA)

- Recommended procedures:
  - Visual Reinforcement Audiometry for Infants (BSA)
  - Distraction Diagnostic Test Protocol (NHSP)
  - Taking an Aural Impression: Children under 5 Years (BSA)