3.3.3 Audiological management of babies with meningitis

- Screening pathway – not screened, direct referral to audiology.
- Confirmed or strongly suspected neonatal bacterial meningitis, viral meningitis or meningococcal septicaemia.
- Referral is the responsibility of the medical team caring for the child. Screening teams should treat these babies as a direct refer to audiology and enter them into the database as such.
- Responsible for identifying child and referral to audiology – medical team.
- Responsible for arranging appointment and follow-up – audiology.

Guidelines for audiological follow-up of babies diagnosed with meningitis

General information

The responsibility for ensuring referral for hearing testing in this group of babies resides with the responsible paediatrician. Protocols need to be in place to ensure referral from the paediatric wards or NICU/SCBU to audiology. The baby should be referred to audiology urgently and seen ideally before discharge from the hospital. If this is not possible an outpatient appointment should be scheduled within 7-10 days. Urgent assessment is required to identify severe/profound hearing loss, which may require cochlear implant(s) before any cochlear ossification takes place. The timing of tests needs to be practical and flexible. The aim should be to determine ear-specific and frequency-specific auditory thresholds as soon as possible, to identify hearing loss of any degree or configuration. Children can also have complex developmental problems following meningitis. At any age, if ear-specific and frequency specific information cannot be obtained to exclude a significant hearing loss an urgent referral to ORL must be completed and a joint plan for future assessment (eg GA-ABR) should be made.

Under 12 weeks corrected age

The baby should be referred for assessment irrespective of whether or not they have been screened and irrespective of the screen result as they are very high risk for having a hearing loss.
In the first instance, testing would normally be a diagnostic DPOAE test and high frequency acoustic reflex threshold. Further urgent assessment using ABR should be arranged if robust responses are not obtained for both DPOAE testing and ART testing.

Between 12 weeks and six months corrected age

Testing would normally be a diagnostic DPOAE test and high frequency acoustic reflex threshold. Further urgent assessment using ABR (under general anaesthetic for older infants) should be arranged if robust responses are not obtained for DPOAE testing and ART testing. If DPOAE testing indicates robust results and the infant has previously passed their newborn hearing screen then an ART is not mandatory.

Over six months corrected age

Testing would normally be by VRA using ear-specific and frequency specific stimuli and diagnostic DPOAE testing and immittance as required. A significant hearing loss should be

excluded. If clear ear-specific and frequency-specific information cannot be obtained for whatever reason, an ABR under general anaesthetic should be considered.

Further follow-up

For all ages, there appears to be no good evidence supporting the need for further follow-up if the hearing is found to be normal following meningitis, therefore further testing is not mandatory.