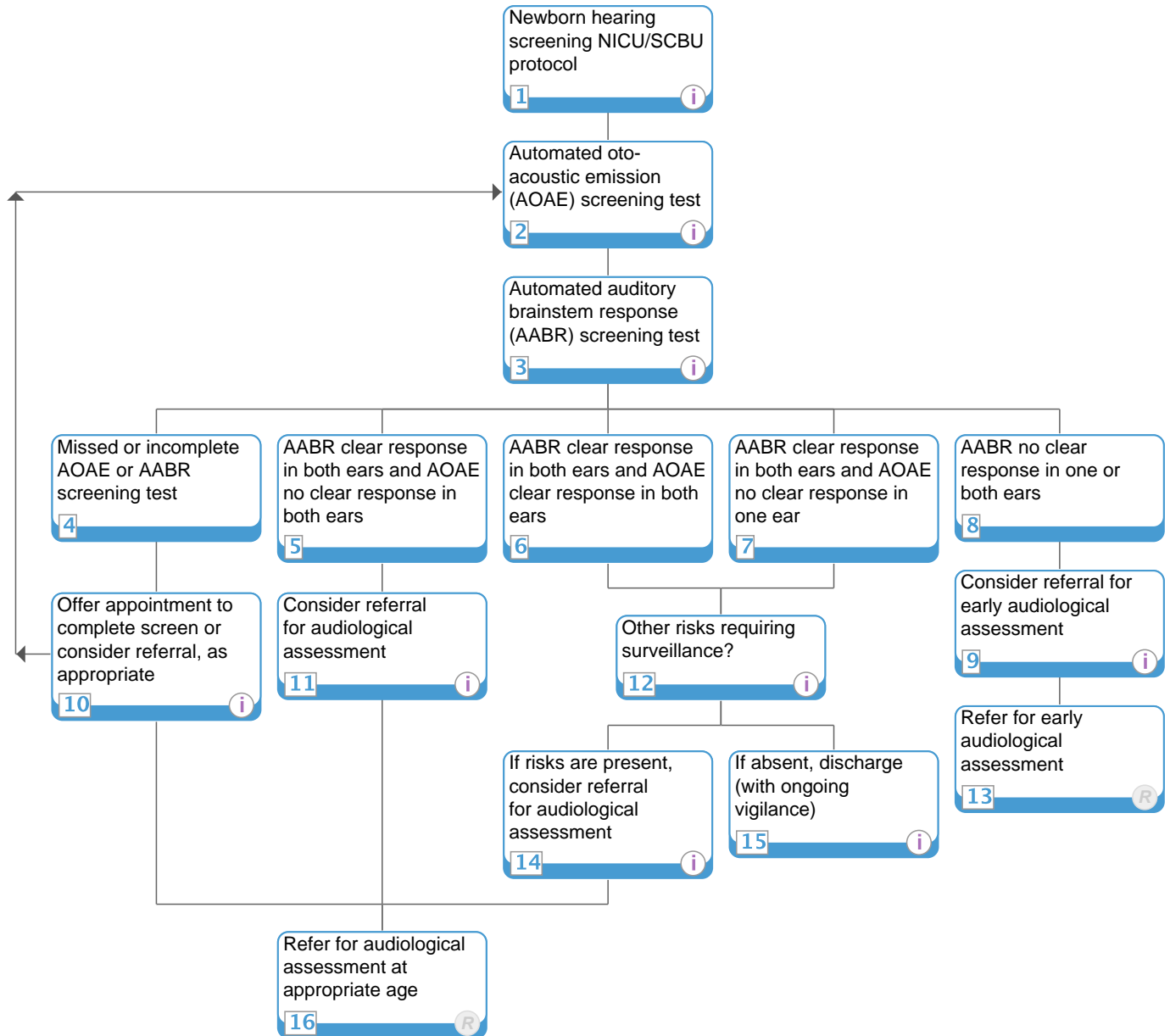


Newborn hearing screening - NICU or SCBU protocol

Paediatrics > Screening > Newborn hearing screening

i Information
■ Primary care
■ Secondary care



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1 Newborn hearing screening NICU/SCBU protocol

Quick info:

Scope:

- neonatal intensive care unit or special care baby unit (NICU or SCBU) protocol screening for hearing impairment in newborn babies
- it summarises guidelines developed by the NHS Newborn Hearing Screening Programme (NHSP) in England; more information about NHSP and supporting materials for these pathways can be found on the [NHSP website](#)

Key points:

- screening tests used are:
 - automated oto-acoustic emission(AOAE)
 - automated auditory brainstem response (AABR)
- both AOAE and AABR must be performed on both ears, order of testing is discretionary (but is illustrated in this care pathway in the usual manner of AOAE first)
- in hospital based services, screening in NICU is performed by one of the hearing screeners; in community based services screening in NICU may be performed by various people, including trained NICU nurses

Timing:

- ideally complete screening as close to discharge as possible while the baby is in hospital
- wherever possible, baby should be well and any major medical or drug treatment completed
- if the process is not completed in hospital, an outpatient or clinic appointment or home visit is required to complete the process, usually within one visit
- aim to complete screening by 44 weeks gestational age (4 weeks corrected age)
- screening should not be performed on babies less than 34 weeks gestational age

2 Automated oto-acoustic emission (AOAE) screening test

Quick info:

- unlike in the well baby protocol, only one automated oto-acoustic emission (AOAE) attempt is carried out
- attempt the test in both ears unless considered inappropriate

3 Automated auditory brainstem response (AABR) screening test

Quick info:

- attempt the test in both ears unless baby has a skin condition which makes it medically inadvisable to attach electrodes

9 Consider referral for early audiological assessment

Quick info:

- referral for audiological assessment should be made immediately
- aim to start the assessment process within 4 weeks of screen completion
- the assessment care pathway is detailed in the [Medical Research Council \(MRC\) Hearing and Communication Group website](#)
- the assessment will generally include auditory brainstem response (ABR) and should be at the specialist centre where there are full audiology facilities, not at 'tier 2' or intermediate or community audiology clinics

10 Offer appointment to complete screen or consider referral, as appropriate

Quick info:

Newborn Hearing Screening Policy (NHSP) policy for missed and incomplete screens is that:

- babies under age 3 months (corrected age) should be offered an appointment to complete the screen from whichever stage (AOAE or AABR) had been previously reached
- babies over age 3 months should be considered for referral to audiology at an appropriate age
 - in most cases the referral will be at age 7-12 months for behavioural testing
 - in the event of parental or professional concern, an earlier appointment may be required, using whatever methods are appropriate and possible

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NB: This policy may be interpreted flexibly according to the individual clinical and other circumstances.

11 Consider referral for audiological assessment

Quick info:

- in most cases the referral will be at age 7-12 months for behavioural testing
- in the event of parental or professional concern, an earlier appointment may be required, using whatever methods are appropriate and possible

12 Other risks requiring surveillance?

Quick info:

The following risks require surveillance:

- parental or professional concern about the infant's hearing, development of auditory or vocal behaviour
- high risk of chronic middle ear problems, eg. Down's syndrome, cleft palate
- other craniofacial abnormalities
- family history of permanent sensorineural hearing loss (SNHL) from early childhood (in parents or siblings only)
- neonatal intensive care unit (NICU) or special baby care unit (SCBU) child who had intermittent positive pressure ventilation for more than 5 days
- jaundice or hyperbilirubinaemia requiring exchange transfusion
- proven or possible congenital infection due to one of the following (TORCH):
 - toxoplasmosis
 - rubella
 - cytomegalovirus
 - herpes
- neurodegenerative or neurodevelopmental disorders
- ototoxic drugs with monitored levels outside the therapeutic range
- the full Newborn Hearing Screening Programme (NHSP) Guide to Surveillance can be found on the [NHS screening website](#)

14 If risks are present, consider referral for audiological assessment

Quick info:

- in most cases the referral will be at age 7-12 months for behavioural testing
- in the event of parental or professional concern, an earlier appointment may be required, using whatever methods are appropriate and possible

15 If absent, discharge (with ongoing vigilance)

Quick info:

No further follow-up is formally required but services should be responsive to any parental or professional concern about hearing and be able to offer appointment for audiological assessment at any age.

Ongoing vigilance:

- some babies may develop problems which may affect hearing after the screen or other risk factors may come to light – such babies should be referred to audiology for an age appropriate assessment
- bacterial meningitis and temporal bone fracture:
 - if these conditions occur at any point in infancy or childhood after the screen then, on recovery, immediate referral should be made to audiology for an age appropriate audiological assessment within 4 weeks of discharge from hospital

Parental or professional concern:

- parental concern about an infant's hearing, development of auditory or vocal behaviour should always be taken seriously
- all professionals who may be in contact with a child should feel able to refer to audiology if there is parental concern, or if they themselves are concerned
- these children should be offered a hearing assessment as soon as possible carried out by an appropriately trained team

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Key Dates

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