



**BRITISH ACADEMY
OF AUDIOLOGY**

Quality Standards in Paediatric Audiology

July 2022

For Review July 2025

Acknowledgements

The British Academy of Audiology (BAA) Service Quality Committee (SQC) wishes to acknowledge the work that has been undertaken in the past by numerous organisations which have informed these standards. Those of particular interest to members which have informed this document are:

Quality Standards in the Newborn Hearing Screening Programme – NHS England July 2010

Quality Standards in Early Years Services for Deaf Children – NDCS 2012

Quality Standards for Children's' Hearing Services – NHS Wales 2016

Quality Standards for Paediatric Audiology Services – NHS Scotland 2009

Newborn Hearing Screening Quality Assurance Framework 2007

We would also like to thank all individuals and organisations which took part in the consultation.

List of Acronyms

ABR	Auditory Brainstem Response
ACHS	Academy for Healthcare Science
BAA	British Academy of Audiology
BAEA	British Association of Educational Audiologists
BATOD	British Association of Teachers of the Deaf
BSA	British Society of Audiology
BSI	British Standards Institution
CAMHS	Child and Adolescent Mental Health Services
CHSWG	Children's Hearing Services Working Group
CMV	Cytomegalovirus
CPD	Continual Professional Development
CROS	Contralateral Routing Of Signal
DSL	Desired Sensation Level
ENT	Ear Nose and Throat
GP	General Practitioner
HCPC	Health and Care Professions Council
IMP	Individual Management Plan
ISO	International Organisation for Standardisation
NAL	National Acoustics Laboratory
NDCS	National Deaf Children's Society
NHS	National Health Service
NHSP	Newborn Hearing Screening Programme
NICE	National Institute for Health and Care Excellence
OME	Otitis Media with Effusion
PCHI	Permanent Childhood Hearing Impairment
PEACH	Parents' Evaluation of Aural performance of Children
RCCP	Registration Council for Clinical Physiologists
REM	Real Ear Measurement
RECD	Real Ear to Coupler Difference
RTT	Referral To Treatment
S4H	Smart 4 Hearing
SII	Speech Intelligibility Index
SQC	Service Quality Committee
TOD	Teacher of the Deaf
UKAS	United Kingdom Accreditation Service
VRA	Visual Reinforcement Audiometry

Contents

Introduction.....	5
Hearing loss in Children	5
Existing Paediatric Audiology Quality Standards in the UK.....	5
Development of these Standards	5
Process for development	6
Implementation of Quality Standards in Audiology	6
Other Quality Measures (e.g. IQIPS)	6
Section 1 – Access.....	7
Section 2 – Communication.....	9
Section 3 – Assessment and Aetiology	11
Section 4 – Individual Management Plan	14
Section 5 – Hearing aid management, selection, verification and evaluation	15
Section 6 – Skills and Expertise.....	18
Section 7 – Service Effectiveness and Improvement	19
Standard 8 – Collaborative Working	20
References	21

Introduction

Hearing loss in Children

It is known that without timely and effective intervention, hearing loss has a detrimental impact on a child's development, including their language and communication, educational achievement, emotional well-being, and employment options ^{1,2,3}.

Approximately 50% of cases of D/deafness by the age of 10 are present at birth and detected by the newborn hearing screening programme (NHSP). Whilst the implementation of a NHSP has been a great success with around 27 babies a week being identified with a permanent childhood hearing impairment (PCHI) in England, the NHSP is not designed to detect mild hearing loss in infants, and a significant number of permanent hearing losses in children are of later onset than birth ^{4,5}. In addition, fluctuating temporary hearing losses caused by middle ear effusions are common in children and can lead to delays in speech development, behavioural problems and educational achievement ⁶.

Paediatric audiology services play an essential role in the identification of all children with hearing loss, and timely and effective management of that deafness. Individual audiology services and the teams that support children should aspire and strive to deliver the best possible care to children / young people and families.

Existing Paediatric Audiology Quality Standards in the UK

Quality standards for paediatric audiology services currently exist and are already used within many services and areas within the UK. These include:

- Quality Standards for Children's' Hearing Services – NHS Wales 2016
- Quality Standards in Early Years Services for Deaf Children – NDCS 2012
- Quality Standards in the Newborn Hearing Screening Programme – NHS England July 2010
- Quality Standards for Paediatric Audiology Services – NHS Scotland 2009
- Newborn Hearing Screening Quality Assurance Framework 2007

For details on how these existing quality standards were developed, please see the individual documents.

Development of these Standards

BAA are aware of and support the use of existing quality standards for paediatric audiology within the UK and recognise that whilst there is no formally recognised UK wide document, standards have been adopted within three of the four Home Countries.

BAA have developed this set of quality standards as an alternative option for those services / countries where quality standards are not currently in use. It is of significant note that these standards do not aim to replace or supersede existing paediatric quality standards developed and used within the UK.

Process for development

These standards have been developed by the BAA Service Quality Committee, in-line with the BAA Production of Documents guidance. This included both early stakeholder consultation with a number of organisations including the BSA, BAPA, BAAP, NDCS, heads of service groups and later public consultation.

The BAA recognises the complexity and range of procedures that make up “good practice” in paediatric audiology, and that services are structured and commissioned differently across the UK. The processes and pathways involved within paediatric audiology have therefore been broken down into key sections and components that should be common to most paediatric audiology services. The standards describe good practice and cover many aspects, from timings of appointments and measures of functional hearing to the use of tools to provide evidence of health outcomes. Section 3C specifically covers the aetiological investigations required if a permanent hearing loss is identified. Whilst not the responsibility of audiology services to quality assure this part of the service, they are included for completeness and to ensure that audiology services have good oversight over this important part of the pathway.

Implementation of Quality Standards in Audiology

BAA recognise that the value of any set of quality standards lies in their effective implementation. This includes both a robust process for audit and reporting as well as a clear mechanism for action planning and improvement.

An audit tool and FAQ have also been developed to accompany these standards and to support their implementation. Audit of these standards is not currently compulsory, however it is hoped that with defining what a good service now looks like, services can benchmark themselves and compulsory audit can be developed with an accrediting or regulatory body.

Other Quality Measures (e.g., IQIPS)

Compliance with quality standards should not be used in isolation to specify or determine the efficacy of services and should be used alongside other measures of health outcomes and service user satisfaction. These standards should be seen as aspirational and a demonstrable plan of how services are working towards standards which have not yet been achieved should not be detrimental to accreditation by an external body (e.g., UKAS).

Section 1 – Access

Standard 1a - All services should have clearly defined pathways for patients and families to access audiology services in a timely fashion, at a convenient location and time and in facilities that are fit for purpose.

1a. 1. There are clearly defined referral pathways for all referral sources which are ideally reviewed at least every three years with commissioners. Services should consider accepting referrals from parents/carers, but all should accept referrals from sources other than a GP e.g., School Nurses, Health Visitors or Speech and Language Therapy to avoid any GP gatekeeper issues.

1a. 2. The local Newborn Hearing Screening Programme (NHSP) within the service meets at least the acceptable level of each of the programme standards and works towards the achievable levels. Referrals for diagnostic assessment are seen within the standard timescales of the programme (NHSP-S04 and NHSP-S05)⁷.

1a. 3. The Service has defined triage criteria for designating routine and urgent referrals. Urgent referrals should include, for example, hearing tests following confirmed or suspected bacterial meningitis, babies with congenital CMV and newly identified PCHI.

1a. 4. Routine new referrals of children outside of the NHSP are offered an appointment for diagnostic hearing assessment within six weeks of receipt of referral.

1a. 5. Urgent new referrals and NHSP referrals for diagnostic hearing assessment are offered an appointment within four weeks of receipt of referral and being well enough to be test.

1a. 6. When a hearing loss is identified and a decision to fit amplification is made, an initial appointment to fit the hearing aids is offered within four weeks from the date of decision (either for temporary or permanent hearing loss).

1a. 7. Children requiring follow up hearing assessment or hearing aid review should be offered an appointment within six weeks of the previously agreed review date, for example a child due for annual review on 01/01/2023 should be seen for that review by 12/02/2023.

1a. 8. Flexibility in appointments is available where possible. Where the service is delivered from multiple locations, a choice of locations is offered, as is a choice of time, e.g., offering appointments outside of school time.

1a. 9. Where clinically appropriate the service offers virtual appointments/remote care in accordance with local remote care guidance, to offer greater appointment flexibility.

1a. 10. Appointment reminders are offered in a variety of formats to promote accessibility, e.g., text messages, emails, and phone-calls.

1a. 11. The premises for providing care has good physical access, including for buggies or families with additional needs, and areas should be sign posted ³.

1a. 12. The department has sufficient facilities to assess children and all facilities are in line with local and national infection control guidance.

1a. 13. Robust estate, cleaning and infection control policies are in place and adhered to. Compliance with these policies should be regularly reviewed and documented

1a. 14. There is a clear transition process for those patients requiring ongoing audiological care within adult services, either those with hearing aids or with conditions which require life-long monitoring. These are established, embedded, and regularly reviewed. Information on current hearing levels, hearing aid model, prescription formula and assistive listening devices should be held by the patient and circulated by the paediatric service to the adult service prior to transition

1a. 15. Audiology services should offer referral to other services including ENT, paediatrics, education (Teacher of the Deaf services), speech and language therapy and third sector (e.g., NDCS) ideally without having to return to the GP.

1a.16. Discharge from the service follows strict criteria which are documented in policies and through national or local guidance.

Standard 1b - Service demand and referral data are monitored, reviewed, and reported to assist with service planning. This is particularly important following backlogs in service provision from COVID-19

1b. 1. Waiting times for the service are monitored, as per 1a, and are based on robust data collection which is reported to appropriate bodies (e.g. DM01 to NHS England or Waiting Time Standards to Scottish Government)⁸. Where waiting times do not meet those set out in 1a, recovery plans are in place or being developed to ensure compliance.

1b. 2. The service has clearly defined acceptance and rejection criteria for referrals with action taken to address any non-compliance with referral criteria.

Section 2 – Communication

Standard 2 - Each service has process and structures in place to facilitate good communication with children, young people, and families. Protocols are based on effectiveness and efficiency of procedures.

2. 1. Information regarding the appointment (for example how to prepare for the appointment) is provided as part of the appointment booking process. This should include access to directions/maps, parking facilities, public transport details, appointment duration, facilities available and, if possible, which member of staff the family will be seeing. This will also include a way for families to contact the department in advance, for example for changes in appointment or if an interpreter / any reasonable adjustments are required.

2. 2. Families are provided with a choice of communication methods to contact the department, including phone numbers, postal address, text messaging and email. 95% or more of contacts are returned within two working days and this is routinely monitored.

2. 3. Qualified interpreters are available to attend appointments where required to ensure the family / young person is fully involved and any process understood.

2. 4. Departments should offer both access guidance on their service for specific groups and condition-specific information, such as a guide to their services for young people who may be autistic or with learning disabilities and information on glue-ear. As a minimum, all information provided to families should be either from a recognised source or, where locally produced, in 'Plain English' ⁹, produced with patient input, kept up-to-date and reviewed at regular intervals.

2. 5. Children, young people, and families will receive both an accessible verbal explanation of the assessment results and diagnosis supporting literature (if required) on the same day that the assessment is carried out. This includes information about any follow-up arrangements and timescale. For patients who are discharged, information should be given on how to access the service again if required.

Where results are subject to peer review e.g. ABR, the family should be advised that these are preliminary results which will be confirmed by review, and they will be notified if there are any differences between the results they are given and the final outcome.

2. 6. Departments should issue written information including copies of the clinical letters within two weeks of the appointment or peer review being returned to the families, referrer, the child's GP, and any other relevant professionals such as educational services. This should include an explanation of the results and details of the agreed management plan with time scales.

2. 7. Children, young people, and families are routinely given information about support services, including education sensory support, local and national voluntary groups for children and young people.

2. 8. Services should attempt to source translated materials to ensure that children, young people, and families have access to information in their preferred language. Where this is not possible, this is monitored and if appropriate, further translated materials are requested.

2. 9. For patients undergoing transition to adult services, information should be provided to young people on the transition process and future from the age of 14 so that they can take an active part in their own transition.

2. 10. All cases referred from the NHSP or with PCHI are inputted to the relevant database, such as S4H, for audit and monitoring of results and outcomes. Where a child is identified with a late onset hearing loss, this is reported and documented in accordance with national and local guidelines.

Section 3 – Assessment and Aetiology

Standard 3a - All referred newborns, infants, children, and young people receive an audiological assessment which is appropriate to their age and stage of development, designed to enable definition of degree and nature of hearing loss.

3a. 1. Local care pathways are available with a range of recognised behavioural and objective audiology assessment techniques across age and developmental ranges, e.g. VRA, performance audiometry, PTA, tympanometry, reflexes and OAEs as a minimum for behavioural assessment. Each department will specify which techniques they offer on their website and where others are available if required for an individual's need.

3a. 2. All audiological procedures follow national standards/guidelines (e.g. BSA) where these exist. Where they do not, there is a well-defined local protocol or guidance with adequate equipment and staff experience in place to be able to make appropriate adjustments for the assessment of complex cases. Where local policy deviates from national standards / guidance, this should be documented locally, a clear reason for this should be outlined and regularly risk assessed.

3a. 3. Cases for which degree and type of hearing loss is not defined at the first appointment have consideration of alternative procedures for the follow up appointment if required (staff, equipment, time, technique for testing).

3a. 4. All equipment is calibrated in line with the recommended frequency (mostly yearly) to international ISO or BSI standards and this calibration is documented.

3a. 5. Daily checks of equipment are carried out according to ISO, BSA or manufacturers' recommendations and completion of these checks is documented across all clinics for each piece of equipment in use that day.

3a. 6. Hearing assessments are carried out in appropriate acoustic conditions, ideally in soundproof or treated rooms. As a minimum, where there is a risk of ambient noise levels impacting hearing assessment as per BSA 2014¹⁰ there is a local policy in place for monitoring and mitigating this risk.

3a. 7. Consideration is given to the layout of the room for optimal testing efficiency and accuracy including options for recording testing for peer-review (distance to VRA rewards, view of child by tester, positioning of parent, wires for inserts and bone conductor). The service has a range of engaging and developmentally appropriate toys and games, furniture, and equipment for stimulus presentation.

3a. 8. Recording of results for behavioural testing is in line with BSA national guidance for the test¹⁰.

3a. 9. The service takes an active part in both internal and external ABR peer review which is consistent with BSA Guidance¹⁵ and all ABR testers demonstrate clear competency with the technique.

Standard 3b -The results of audiological assessment should form a clearly defined, appropriate management plan for the child or young person

3b. 1. All assessments are interpreted using data-driven protocols with evidence-based practice (e.g. two out of three ascending positive responses)¹⁰. This should be assured by internal peer-peer observation and documented.

3b. 2. Consideration is given to the developmental profile of the child, with options to change the test strategy / testing if required.

3b. 3. Written local and national protocols / guidelines, are routinely followed. Protocols / guidelines should define appropriate management options for the needs derived from the assessment, referral on, review appointment and decision to discharge. Regular audit that management decisions meet those detailed within the protocol / guidelines should be carried out to ensure it is embedded

3b. 4. For children with PCHI, amplification should be provided in accordance with family centred care guidelines i.e. with informed family / caregiver choice and consent and with timely provision of information based on current scientific evidence.

3b. 5. Services adhere to the NICE guidelines for OME management which include consideration of watchful waiting, amplification, medical intervention and evidenced based non-invasive intervention (e.g. Otovent). Compliance with these guidelines is monitored and reported.

3b. 6. Audiology reports and testing should include patient / parent observations about the child's hearing ability. Where discrepancy exists between patient / parent reported observation of hearing and audiometric results, i.e. parents feel strongly there is a hearing issue, but behavioural assessment is normal, it is good practice to include a 'cross check principle' on the results, which may include but is not limited to OAEs, acoustic reflexes, functional speech testing, ABR etc. Where required further investigation, support and management should be arranged

3b. 7. NICE criteria for consideration of cochlear implantation for children and families are discussed with families. Where a child or young person is within those criteria, a documented conversation should take place at the earliest possible opportunity to offer the family a referral. All children and families whose audiological status meet these criteria should also be given information or directed to further information on cochlear implants in their preferred language (where this is available).

3b. 8. For children with permanent sensorineural hearing loss, a discussion on the parent / carers choice for mode of communication should take place at the point of diagnosis or at a time close to it appropriate to the family. This should be documented including information visual/signing, total communication and talking and listening options. These options should be regularly reviewed with the family to ensure that informed choices are made.

3b. 9. An individual management plan is created for each child. This should be documented, updated, and reviewed at each appointment. (See section 4.)

3b. 10. The involvement of support services (usually education) should be introduced to parents at the earliest opportunity following a diagnosis of PCHI. If parents / carers consent to a referral, support services should be informed about the diagnosis within two working days.

Once consent has been obtained, support services should be included in copies of all assessment and rehabilitation information for that child thereafter and given the opportunity to attend appointments (face to face or virtually) if appropriate.

3b. 11. Ideally Children's Services (from education, speech therapy, or other specialist providers) should contact the family within two working days of being informed of a new PCHI diagnosis.

Standard 3c

All newborns, infants, children, and young people diagnosed with a permanent childhood hearing impairment should have / or be offered appropriate aetiological investigations for the hearing loss and this should be discussed with parents

3c. 1. The medic carrying out the aetiological investigations for the hearing loss should have appropriate ongoing training in this field and must have a clear understanding of the role and importance of the existing national guidelines for the investigations and should be able to discuss this with the parents.

3c. 2. The responsible medic must keep themselves updated regularly with developments and advances in this field. They must also have the knowledge and expertise to request and interpret the results of the various investigations and be able to explain this to the parents in lay terms. There must also be clear pathways and protocols agreed for onward referrals as necessary.

3c..3. Aetiological investigations should also include a clinical vestibular assessment with pathways in place if a diagnostic vestibular assessment is required.

3c. 4. The service must have clearly defined pathways and protocols for the early diagnosis and management of congenital CMV as progression of the hearing loss associated with this can be prevented by early diagnosis and treatment.

3c. 5. The service must meet clearly defined timescales for newborns, infants, children and young people to see the medic for carrying out aetiological investigations. In the case of newborns, diagnosing and starting treatment for congenital CMV within four weeks of life is vital and as such there must be well defined pathways to achieve this. Some other investigations like Radiology (MRI) can be done without the need for sedation or GA if carried out before babies are three months old and as such they need to be seen as soon as possible once PCHI is confirmed, to facilitate this. In the case of infants, children, and young people, they must be seen by the medical team to carry out the investigations in line with national reporting pathways (e.g. RTT).

Section 4 – Individual Management Plan

Standard 4 - An individual management plan (IMP) is developed for each new patient, agreed with the parents and/or child or young person, updated on an ongoing basis and accessible to all professionals involved with the child's care.

4. 1. An IMP is developed and agreed with each patient which includes the programme of audiological management and details of the next priority for assessment as required.
4. 2. The IMP includes goals and priorities set jointly by the child or young person / family and professionals for their audiological priorities and current speech, language and listening outcomes / progress. Where possible, a specified keyworker from the audiology team is named as a point of contact. These goals and priorities are communicated in copies of letters / IMPs to key support professionals (in education, independent and NHS therapists and third sector) and with the family.
4. 3. For those patients that require transition to adult services, the IMP follows the young person through transition and is forwarded to the adult service. This includes a synopsis of current hearing levels, hearing aids and prescription (NAL or DSL) for the fitting, ALDs and key personnel, with a copy for the young person.

Section 5 – Hearing aid management, selection, verification and evaluation

Standard 5a - All children and young people using hearing aids should have access to services they require in a timely fashion. The goal of amplification is to provide consistently audible speech across frequencies and levels, with flexibility for fine-tuning over time and changes in hearing. This relies on having accurate, recent hearing thresholds in each ear with air and bone conduction testing. Referrals for consideration of amplification are accepted from agencies within and outside the NHS (e.g. ENT, SLT, school screening services).

5a. 1. All children identified with PCHI through recognised audiological provision are offered an appointment for the fitting of amplification / their hearing aid(s) within four weeks of decision to aid.

5a. 2. For temporary hearing losses when hearing intervention is indicated, pathways are in place to facilitate effective amplification (e.g. hearing aid or bone conduction devices), watchful waiting and referral to ENT services if required. Information should be provided to the family / child to make an informed choice on the options for managing their hearing needs in addition to possible referral and monitoring by ENT.

5a. 3. Families requesting routine replacement ear moulds are offered an impression appointment within one week of request. Misplaced / lost earmoulds are treated as hearing aid repairs as per 5a. 4.

5a. 4. Appointments for hearing aid repairs are offered within two working days of request.

5a. 5. Services offer several ways to repair hearing aids such as face-to-face appointments, drop in, postal repairs or drop off and collect.

5a. 6. The service supports its users without need to contact the service, such as by signposting to accessible video clips on simple fault finding or re-tubing from home, utilising other professionals and agencies contributing and maintaining effective amplification use (for example NDCS, voluntary services, TOD, therapists, hearing aid dispensers, ConnEvans, and charities such as Ewing Foundation).

5a. 7. Where a family requests a second opinion on their child's care, this should be facilitated wherever possible, externally if necessary. When not possible, the reason for this should be clearly outlined and documented.

Standard 5b - The service provides a variety of amplification devices, suitable for the needs of the individual child and signposts and supports families effectively to providers of environmental/assistive listening devices if they do not provide them, including through non-NHS agencies (such as NDCS, ConnEvans, Hearing clinics)

5b. 1. The service provides a range of types of amplification devices for the population they serve, e.g. different power hearing aids, bone conduction devices, wireless and radio aid ready devices and CROS hearing aids. The type of amplification and the features / programmes are activated based on the individual child's need with information provided to the child/family to allow them to make informed choices. Volume control and programs, if required, are activated when children can use them appropriately and effectively.

5b. 2. Where hearing aids are fitted, tamper-proof battery drawers are fitted to all children's hearing aids in line with national guidance¹¹, based on age and other needs.

5b. 3. The service discusses environmental assistive listening devices such as remote microphone technology with the child / family and, together with educational services, the options for provision of this technology.

5b. 4. There is a written policy on candidacy for radio aids and remote microphones, agreed with the provider of the device, taking account of recent research and recommendations on use of remote microphone technology and bone conduction devices in pre-school and school-age groups. Collaboration with education, therapy and charity sector agencies is optimised for seamless support in use of remote microphone technology including Bluetooth and streaming options.

Standard 5c - Where hearing aids are provided, the service ensures this provision adheres to agreed procedures and protocols. The performance of hearing aids is matched to the individual requirements of the child, with the settings recorded.

5c. 1. Local protocols comply with the latest professional bodies' guidance and national commissioning guidance concerning the selection, fitting, and verification of hearing aids. Prescription targets are based on evidence-based formulae, considering observations from the child and family (DSL, NAL NL2 etc). Data-logging of the recorded hours of hearing aid use, or situations in which hearing aids are worn, is included in the IMP

5c. 2. Verification of hearing aid performance at first fitting is carried out using Real Ear Measurement (REM) or Real Ear to Coupler Difference measurements (RECD), in line with BSA recommended procedures¹² unless clinically contraindicated where predicted RECDs should be used.

5c. 3. Verification of hearing aid performance by REM or RECD takes place at standard intervals or when clinically relevant to do so and this is documented within the notes.

5c. 4. Where REM / RECD measurements are performed, responses should be adjusted to fall within the recommended target tolerance¹², unless clinically contraindicated and this is recorded within the notes. Where clinically appropriate, the aided SII score should be evaluated using the Ped Amp norms to validate the hearing aid fitting and if appropriate and considered necessary, fine-tuned accordingly¹⁶.

5c. 5. When REM / RECD is contraindicated, predicted RECD should be used. Where insitu REM / RECD is not attempted or cannot be completed or cannot meet target, an explanation is recorded in the notes. Where real ear verification has not been completed appropriate validation is essential. This may include, but is not limited to, review of SII scores and functional speech testing. Real ear verification should be prioritised at the next face to face appointment.

5c. 6. A range of outcome measures is regularly performed by the service in collaboration with the ToD to evaluate detection of sounds through the hearing aids fitting, functional listening of a child and to guide and support further management. This is particularly important when hearing thresholds or hearing aid verification is incomplete. These outcome measures may also include LittleEARs, Peach and other questionnaires to monitor progress and speech/language outcomes. This information is included in the clinical report so that

educational and therapy professionals know what signals are audible in planning structured listening input.

Section 6 – Skills and Expertise

Standard 6 -Each service and member of staff is clinically competent to support the assessments and intervention they undertake.

6. 1. All eligible clinical staff are registered with a registration body, eg HCPC, RCCP or ACHS and participate in relevant CPD activity.
6. 2. Staff in senior positions within the service have significant practical experience and proven competency in paediatric assessment and (re)habilitation.
6. 3. Staff understand the pathways within the Paediatric Audiology service and participate in quality assurance methods e.g. audit to ensure the quality, safety, and efficiency of services.
6. 4. Competency of staff to perform clinical procedures is verified by peer review or competency checks on both the use of equipment and the testing method at least every two years and these are formally documented.
6. 5. If the service undertakes ABR testing, it takes an active part in an external ABR peer review scheme.
6. 6. If the service undertakes behavioural testing (conditioned play audiometry (CPA) and visual reinforcement audiometry (VRA) it undertakes peer-review of these procedures.
6. 7. There is a service process for acting on peer review observations so that opportunities for retraining and upskilling are made available. Training is available within teams through ongoing processes of assessment and appraisal in clinical practice.
6. 8. When a case of mis-identified hearing loss occurs, the opportunity is used to review the case in an open and transparent way. Duty of candour to the family should be explored ¹³. A senior professional should over-see this process to review the factors around the cause of the error, to prioritise and amend the patient-management pathway. A documented procedure and training opportunity is applied to make this error less likely to happen in future.
6. 9. All staff demonstrate competence in the roles performed. There is a record of appropriate training being accessed with at least biennial updates on advances in paediatric audiology, hearing aid technology and assistive devices. Staff should also keep a up-to-date, relevant CPD portfolio for their role and registration.
6. 10. All staff working with the audiology department undergo Deaf awareness training and refreshers every three years as part of their mandatory training.

Section 7 – Service Effectiveness and Improvement

Standard 7a - Each service has processes in place to measure service quality and outcomes which are then used to plan and implement service improvements.

7a. 1. Patients can feedback after every appointment through Friends and Family cards or other hospital schemes.

7a. 2. The audiology service seeks the views of stakeholders at least every two years, including support agencies, CHSWG, charities, education and therapy agencies around outcomes for communication and educational achievement goals for children with PCHI.

7a. 3. The results of surveys, quality assessments, outcomes and areas for improvement are made publicly available. The service level outcome from the NHSP management system (e.g. Smart 4 Hearing (S4H)) database is audited.

7a. 4. Services monitor their quality management on an ongoing basis. A robust audit and clinical assurance timetable and strategy should be in place including where any serious incidents are reviewed annually as information for sharing and training updates.

Standard 7b - The service actively participates with its local users / families and engages them in service planning/improvement.

7b. 1. The service takes an active role in a Children's Hearing Services Working Group (CHSWG) ¹⁴. Where a local CHSWG is not in place, a local user group should exist including educational services, families, children, and young adults, and meets at least twice a year. Services should promote CHSWG or the user group and encourage feedback and suggestions in service planning.

7b. 2. The outcomes of service level quality assurance work, surveys or accreditation are shared with CHSWG and / or reported to the local user group with opportunities for collaboration and inclusion, directed to improved outcomes of management for PCHI children and families.

Standard 8 – Collaborative Working

Standard 8 - Each service has processes and structures to ensure effective collaborative working within both the service and outside agencies, across professional and commissioning boundaries.

8. 1. The service has access to, or can refer children and young people to, as a minimum; educational services, specialist speech and language services, paediatricians, auditory implant services, social care, voluntary agencies and Child and Adolescent Mental Health Services (CAMHS) ideally without the need for them to revisit their GP.

8. 2. Where a family state that care has not met their expectations, the service should be supportive in both exploring how this can be improved and with advice about how to seek onwards referral for a second opinion if desired.

8. 3. When a family / child is referred to another agency, following parental consent there is ongoing sharing of information both by that service and by audiology which routinely feeds back and informs the IMP regardless of whether provision is through NHS, independent or charity-sector agencies. Information around equipment settings is shared between agencies, as standard (grommet insertion, ear-mould provision, glasses prescription, radio aid settings, Cochlear Implant model).

8. 4. The service understands its role in the safeguarding of children, has a nominated safeguarding lead within the organisation and has a policy on safeguarding which is routinely followed.

8. 5. The service has a guideline / policy for children who are not brought to appointments, and this is followed routinely. Children with active management of PCHI should be discussed with the team around the child before discharge is made.

8.6 The service has clear lines of responsibility and accountability within the governance framework, and this is documented within job descriptions and organisation structures.

References

1. Ching TYC, Dillon H, Button L, Seeto M, Van Buynder P, Marnane V, Cupples L and Leigh G (2017). Age at Intervention for Permanent Hearing Loss and 5-Year Language Outcomes. *Pediatrics* 140(3):e20164274. DOI: 10.1542/peds.2016-4274
2. Fitzpatrick E, Grandpierre V, Durieux-Smith A, Gaboury I, Coyle D Na E and Sallam N (2015) Children With Mild Bilateral and Unilateral Hearing Loss: Parents' Reflections on Experiences and Outcomes *The Journal of Deaf Studies and Deaf Education*, 21 (4) 34–43.
3. Walker EA, Holte L, McCreerr RW, Spratford M, Page T and Moeller P (2015) The Influence of Hearing Aid Use on Outcomes of Children With Mild Hearing Loss. *J Speech Lang Hear Res* 58(5):1611-25. DOI: 10.1044/2015_JSLHR-H-15-0043
4. Fortnum H.M., Summerfield A.Q., Marshall D.H., Davis A.C., Bamford J.M. Prevalence of permanent childhood hearing impairment in the UK and implications for universal neonatal hearing screening: Questionnaire based ascertainment study. *BMJ*. 2001;323:536–9.
5. Harrison M., Roush J. Age of suspicion, identification and intervention for infants and young children with hearing loss: A national study. *Ear Hear*. 1996;17:55–62.
6. Archbold S, Zheng Y, Harrigan S, Gregory S, Wakefield T, Holland L, Mulla I, Experiences of young people with mild to moderate hearing loss. *Ear Foundation & NDCS*. 2015
7. Newborn Hearing Screening Programme Operational Guidance, Public Health England, 2020
8. Guide to NHS waiting times in England, NHS England, 2019
9. Accessibility Information Standard, NHS England, 2016
10. British Society of Audiology Recommended Procedure for Visual Reinforcement Audiometry, 2014
11. National Patient Safety Alert, Risk of harm to babies and children from coin/button batteries in hearing aids and other hearing devices, December 2019
12. British Society of Audiology, Guidance on the verification of hearing devices using probe microphone measurements, 2018
13. Care Quality Committee, Health and Social Care Act 2008, Regulation 20
14. Children's Hearing Services Working Groups, a guide, NHS England and Improvement 2019
15. British Society of Audiology, Principles of Peer Review of Auditory Electrophysiological Measurements, 2018
16. The University of Western Ontario Pediatric Audiological Monitoring Protocol Version 1.0, Revision 2, 2015