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Review of Measures to Assure the Quality of Paediatric Audiology Services in Wales

A Report from the Wales Paediatric Audiology Quality Assurance Task and Finish Group

Version number	Main Author	Date	Endorsed by
Version 1	Sarah Theobald	20/02/2024	Audiology Standing Specialist Advisory Group
Version 1.1	Sarah Theobald	11/06/2024	Welsh Scientific Advisory Committee
Version 1.11 Minor formatting corrections		25/07/2024	N/A

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Introduction

Significant shortfalls in quality of care in a children's Audiology service at Lothian Health Board were identified and reported upon in 2021. Following the publication of the initial Lothian Review published by BAA in 2021[1], the Audiology Specialist Standing Advisory Group (ASSAG) to Welsh Government produced a response paper (Appendix 1) which outlined a number of initial actions that would be taken with a view to provide assurance against similar shortfalls occurring in NHS Wales. A task and finish group consisting of representatives from NHS and third sector was established to examine the current situation in greater depth, report on findings and make detailed recommendations for further action, building upon the initial response paper, Appendix 2. This report, addressed to the Welsh Government, describes the approach taken and outcomes from the Task and Finish Group's work, in particular a series of recommendations. Since the commissioning of this work, substantial high-profile government sponsored initiatives in Scotland and England have occurred, with similar ultimate goals to assure quality of care for children with hearing loss. Implementation of the recommendations described below will mitigate the risk of shortfalls in patient care and outcomes.

Background

Nature of Shortfalls reported at Lothian Health Board (as reported by BAA, 2021)

In brief, a lack of scientific leadership, knowledge, reflection and enquiry in the presence of a lack of routine and robust quality assurance processes occurred at Lothian Health Board.

- Nearly all staff had been trained in-house, and not to national standards in both ABR (newborn hearing assessment) and behavioural based testing of pre-school age children, with no form of external competency assessment. This resulted in testing for infants and young children being carried out incorrectly which led to an inability to identify hearing loss in these children.
- There was a lack of scientific leadership with no reflection or critical appraisal oversight on the evidence base for guidelines, assessments, tests and results
- An absence of a routine and robust quality assurance process, coupled with a lack of national oversight of the outcomes from the Newborn Hearing Screening Programme (NHSP) in Scotland allowed this to continue without being identified, until a significant number of children had been adversely affected.

In outcome, children with manageable hearing loss were not identified in a timely way with consequent significant adverse impact on their health outcomes. This provides a driver to closely re-examine quality assurance of Audiology services in Wales, to ensure that our services are robust to such shortfalls.

[1] NHS Lothian Full BAA statement and reports - British Academy of Audiology |British Academy of Audiology (baaudiology.org)

Context and Scope

Since commencement of this work, the Scottish Government has published the report[2] in August 2023 of the Independent Review of Audiology Services that it commissioned in response to the BAA Lothian Report, but not limited to paediatric services. The content of the review report has also been considered by the task and finish group as it relates to paediatric audiology. Similarly, an NHSE led national quality improvement programme is underway in England, focused on paediatric audiology. This has also been prompted by shortfalls in service quality identified through national clinical audit at Trusts in England. It is fair to say that shortfalls in service quality are considered more widespread, occurring across delivery organisations in both countries. Although shortfalls in service quality in Scotland and England are now recognised as being wider than paediatric audiology, the scope of work of this task and finish group has remained limited to paediatric audiology in order to achieve deliverable recommendations in a timely manner and ASSAG is conducting a separate desktop review of the broader set of recommendations from the Review report in Scotland.

Introduction to work of Task and Finish group

A task and finish group was convened to take forward actions in the original ASSAG paper responding to the Lothian Report. The Wales Paediatric Audiology Quality Assurance Task and Finish Group has been meeting for approximately 18 months, has examined available data and has made specific recommendations for consideration by ASSAG. The group have limited their work to the brief agreed in the ASSAG response paper, although opportunity to learn from the related initiatives in the other UK countries has not been overlooked. This has been facilitated by participation from audiologists in Wales in the Independent Review of Audiology in Scotland and ongoing NHS England paediatric hearing services quality improvement programme[3]:

Consideration of related work to investigate and address shortfalls in Scotland and England (2021-Oct 2023):

Given the passage of time since devolution, including the impact on delivery of healthcare and priorities in the respective UK countries, the different healthcare environments in which audiology services sit reflects on quality of care and assurance of services. In short, there are some common challenges and some more unique to the respective countries. This is important to consider when exploring shortfalls elsewhere and recommendations for Wales. However, there are some common elements and transferable lessons to build upon our existing practices in this area:

1.The profile of audiology is relatively poor by comparison with other disciplines, impacting on resourcing and ultimately service quality.

[2] Independent Review of Audiology Services in Scotland - gov.scot (www.gov.scot)

[3] https://www.england.nhs.uk/long-read/paediatric-hearing-services-improvement-programme-system-recommendations-for-immediate-action/

2.There is a need for a broader approach to formal (reported) quality assurance described within a quality assurance framework. This should feature elements that go beyond that provided by periodic audit against service quality standards.

3.There would be mutual benefit in collaboration between the UK countries on quality assurance measures and processes. One example would be benchmarking against an agreed set of national KPIs.

These take-home messages have been considered in shaping the recommendations below.

Consideration of existing factors influential on quality assurance in Wales

The recommendations made below are provided in the context of existing arrangements to assure quality of care in Wales. The group considered shortfalls that were reported at Lothian and subsequently elsewhere in the UK countries and the likelihood of occurrence in Wales. It is recognised that features of current service provision and structures in Wales have mitigated risks to date. It is considered important that the contribution of these features are acknowledged and retained. The key risk mitigating features are as follows:

1.Existence of a government professional advisory group for Audiology

2.Welsh Government endorsed service quality standards with associated mandated and robust external audit

3.Senior healthcare science leadership at consultant level at health board level, providing specialist leadership and oversight of governance.

4.Clarity over responsibilities for delivery of care pathways from newborn hearing screening through to diagnostic assessment and intervention. The model of delivery is enhanced by existence of a national service (within Public Health Wales) responsible for delivery of newborn primary hearing screening and governance overview of subsequent diagnostic assessment, featuring mandated peer review of diagnostic (ABR) assessment.

Contributors

Members of the task and finish group are as follows with individual members inputting to sub-group activity throughout the process.

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Approach

The paper from ASSAG that responded to the Lothian Report, provided an initial action plan. The task and finish group considered the themes and elements presented in the ASSAG paper, to devise three key action headings to which recommendations have been grouped:

1.Quality Assurance

2.Workforce Issues

3.National Infrastructure, reporting and collaboration

The group considered relevant national reports and information sources external to Wales, conducted surveys, otherwise gathered information and sought opinions from Audiology professionals. This synthesis of material informed discussion to devise recommendations. The practical goal was to devise recommendations that are clear, achievable, measurable and that when completed would be effective in mitigating risk to patients through shortfalls in care. The group considered specific risks reported elsewhere in the UK and the context of knowledge of the current position in Wales.

The detailed background and justification for the recommendations is described in Appendix 1 but where significant background work has taken place to derive the recommendations, these can be found in further appendices, Appendices 3 and 4, below.

No specific recommendations have been made relating to the improving the profile of paediatric audiology. However, it is considered that implementation of the recommendations listed below will collectively assist in raising the profile and reputation of paediatric audiology in Wales.

Summary Recommendations

Quality Assurance

1. Performance of health boards against the ASSAG endorsed set of KPIs relating to paediatric audiology services and implantable device services, Appendix 3, should be reported by the Audiology Wales Heads of Service Group annually to ASSAG. These should sit alongside other endorsed KPIs relating to school entry hearing screening in the Audiology Quality Framework. The KPIs should be reviewed annually to ensure relevance and robustness.

2. Public Health Wales should work towards the implementation of routine measurement and monitoring of positive predictive value (PPV) of the newborn hearing screen at a site-specific level in addition to the current national PPV reported figures. Newborn hearing screening PPVs should be reported to ASSAG along with all other paediatric audiology KPIs as part of the Audiology Quality Framework.

3. Case study audit should be routinely employed and embedded at local service and national level. This should consider all pathway elements, including outcomes of referral to implantable devices and relevant action plans. This should be specified within the service quality standards for routine inclusion into quality assurance events and CPD activities/events.

4. An 'Annual National Paediatric Audiology Quality Assurance Event' involving all health boards and NBHSW should be introduced to share good practice and promote challenge and peer review. The participation in and outcome of the event would feed into quality standard performance. The first audit event should be planned for Q3 of 2024/2025.

5. The measurement, reporting and actions taken relating to KPIs should be integrated into version 3 of the Quality Standards for Children's Hearing Service. These KPIs should implemented in Q4 of 23.24 for reporting along with the Children's Quality Standards in Q4 of 2024/2025.

6. The Quality Standards for Children's Hearing Services should be reviewed, to ensure that they are up to date, reflecting the latest professional good practice. This should commence immediately with draft version 3 being available for Audit in Q4 of 2024/2025.

Workforce Issues

7. Minimum training standards devised by the group for assessment of hearing for children developmental age of under 4, Table 1 & 2 and Appendix 4, should be implemented immediately and included in the Children's Hearing Services Quality Standards version 3 for ongoing measurement. Health Education and Improvement Wales, Welsh Government and health boards should support and enable audiology services to achieve the minimum training standards.

8. Immediate adoption of the recommended minimum peer observation process, Table 3 & 4 and Appendix 4. A task and finish group is to be convened to specify one (or more) recommended methodologies for ongoing observational competency checks. This will include exploration of a national observational peer review programme for visual reinforcement audiometry. Compliance against the recommended methodologies recommended by the peer review task and finish group and approved by ASSAG should be included in the version 3 of the Children's Quality Standards.

9. Within each health board delivering advanced assessment of pre-school age children, there should be professional healthcare scientist support provided by a senior Clinical Scientist in paediatric Audiology. This should ideally be provided by Healthcare Scientists within the direct line management within a service, but otherwise by formal cross-Health Board (network) agreement, Appendix 5.

National Infrastructure, reporting and collaboration

10. A national Audiology Quality Framework should be adopted that describes the range of measures to improve and assure quality of care for those accessing NHS Audiology services in Wales. Scope should include audit against service quality standards and performance against KPIs referred to in this document and patient experience measures.

The framework should include reporting and escalation processes and be in place by Q3 2024.25.

11. Health Boards, Welsh Government and Health Education and Improvement Wales should assist the Audiology profession to identify and support the capacity, skills and knowledge required to monitor, analyse and report against the elements in the Quality Framework.

12. A digital dashboard for reporting on the range of performance measures referred to in this report should be developed with the support of Digital Health Care Wales. Elements should be reported through to the public domain through the Stats Bulletin and national Audiology Website.

13. The Audiology Data and Digital Task and Finish Group Proposal for the scoping of the data and digital needs of Audiology services should be supported in order to provide robust data collection and reporting to assure quality.

14. Information systems and resources should be available at PHW to support robust and accurate calculation of the PPV as a regularly reported KPI.

15. Future versions of the Children's Hearing Service Quality Standards should consider if there are lessons to learn from alternative approaches to assure quality and accredit services, adopted elsewhere in the UK. eg, UKAS IQIPS,

16. Collaborations should be pursued with other UK countries regarding benchmarking of KPI, development of standards and reciprocal arrangements to assure robustness of audit against standards.

17. Formal reporting to Welsh Government of Paediatric Audiology waiting times should be included the NHS Performance Framework for 2024-25. Health Boards should consider paediatric audiology waiting times in their performance reporting with aim of achieving the maximum waiting times in defined in the Quality Standards. The plan should be devised immediately to achieve the required standard by end Q4, 2024.25.

18. Collaboration with third sector organisations should be strengthened, featuring at least annual invites for attendance at HOS meetings and otherwise engagement in the quality assurance agenda.

The progress against these recommendations, will be monitored and a review of the recommendations undertaken if required informed by work undertaken in other UK nations or by the British Academy of Audiology or British Society of Audiology as well as outcomes of the Children's Hearing Services Quality Standards and KPI reporting.

Appendix 1: Approach to the development of the recommendations stated above:

1. Quality Assurance

The Wales Lothian Task and Finish Group have considered the current and future quality assurance processes used in Audiology in Wales. In line with the initial response to Welsh Government, it has considered and developed thirteen key performance indicators relating to access, diagnosis and intervention times and practice has considered how these should be measured, particularly in relation to the Quality Standards for Children's Hearing Services.

The development of the Wales Audiology Quality Framework within which will sit the Quality Standards, measures relating to patient experience and specific quality monitoring such as of the new National School Entry Hearing Screening Programme, provides a governance framework for the reporting and monitoring of outcomes relating to the KPIs.

Other methodologies of measuring performance have been considered such as positive predictive value. This has not been included in the set of KPIs but is thought to be a useful measure of effectiveness of diagnostic hearing assessment following a newborn hearing screening referral. As an increasingly used tool for quality management in England, *Improving Quality in Physiological Services* (IQIPS) has also been considered by the group and a recommendation made in order to strengthen the robustness of the Quality Standards in Wales.

1.1 Development of the KPIs

Where national accepted standards exist, the KPIs relate to those standards but where they do not, there is an opportunity to examine the results over a period of time and develop standards in the future. In these cases, where needed, a timescale has been chosen by consensus. The document in Appendix 3 describes each of the recommended key performance indicators, the rationale, data to be collected and reporting and review mechanism. The aim is for consistent collection using templates so that performance can be compared between Health Boards and over time. The KPIs cover incidents and concerns, access times, diagnosis and intervention times and practice including referral for specialist implantable devices. The KPIs relate specifically to access and the new identification and subsequent management of significant hearing loss, defined as permanent bilateral hearing loss with a 4 frequency average of 40 dB HL in the better hearing ear (or at 4 kHz for identification via Auditory Brainstem Response assessment) due to the time critical impact of these hearing losses on speech, language and social development.

In particular, the task and finish group were asked to consider whether there were any additional key performance indicators that could be used to provide assurance against the referrals to, and the management of referrals within, implant services. A preliminary request for data showed that from data currently held it was not easy to obtain information that related to individual health boards. Therefore, the group considered which KPIs would provide a consistent measure of performance of both referrers and implant centres in the timely and appropriate management of children eligible for implantable auditory devices based on Audiological criteria. These KPIs have been included in the KPI recommendations with three of the KPIs specifically requiring response by Auditory Implant Centres. The areas thought to be of importance in measuring quality are time to referral following diagnosis, numbers of referrals per health board (considered proportionally)

proportion and reasons for non-implantation and intervention times. The task and finish group also met with the lead audiologist developing the Quality Standards for Auditory Implantable Devices to ensure alignment where possible across the KPIs and the standards.

Another area of particular focus is the definition and use of progressive hearing loss. Progressive hearing loss can create significant challenges in the identification of hearing loss but in the Lothian review there was a finding that use of a progressive hearing loss diagnosis was overused to explain a change in findings between assessment episodes. The task and finish group carried out a survey of health boards for children diagnosed with significant hearing loss after age 5 and obtained data from NBHSW for children diagnosed up to the age of 5 to try to determine whether the incidence of hearing loss defined as progressive could be obtained and compared. Interrogation of the data found that the reasons for diagnosis and descriptions provided were very variable and it was not possible to draw conclusions at Health Board or national level based on the data obtained. There did not appear to be an 'over reliance' on the use of progressive hearing loss as a reason for late diagnosis, but without an in-depth analysis of all individual cases it has not been possible to draw robust conclusions and therefore the data is not included in this report.

The task and finish group therefore set about developing a key performance indicator that would provide for consistent data collection and reporting on 'later diagnosis' including by defining progressive and acquired hearing loss. This is KPI number 7. Given that later diagnosis is of low incidence and there are many factors influencing a later diagnosis, both quantitative and qualitative data is recommended in order to assess this measure and review of the data is recommended to include peer reflection, challenge and sharing of good practice. This practice already forms part of the NBHSW annual training day for individuals carrying out newborn diagnostic assessments and so is likely to be welcomed by audiologists.

The collation of complaints and incidents has been included in the list of KPIs as a useful measure of quality and quality governance within services. A survey of services covering a twelve month period did not reveal any significant incidents which provides further assurance although it is recognised that low reporting of complaints and incidents can also be cause for concern. The KPI will allow for data collated over time will allow for examination of themes within welsh paediatric audiology services, identify outliers ensure that internal health board governance structures are in place.

Whilst Health Board Audiology services will collate the majority of the data, NBHSW and Specialist Implantable Device centres hold some of the data required and will be asked to lead on the reporting and peer review of these elements.

1.2 Review of KPI outcomes

The group have made recommendations as to the use and review of the KPIs.

a) The annual measurement, reporting and actions taken by health boards in relation to the recommended KPIs should be included as criteria in version 3 of the Quality Standards for Children's Hearing Services and in the Quality Standards for Auditory Implantable Devices in Wales. This will ensure that participation in the measurement and reporting of the KPIs is undertaken but also that any actions required to improve performance are planned and undertaken.

b) Where indicated in the list of KPIs, outcomes against the specific KPIs (KPI 4, 5 and 6) should be included as criteria in the next version of the Quality Standards for Children's Hearing Services and in the Quality Standards for Auditory Implantable Devices in Wales. This will ensure that where appropriate performance against the specific KPIs are measured and reported to WG as part of the mandated audit cycle.

c) All of the specified KPIs should be measured on an annual basis and reported through to ASSAG. The HoS group, or a nominated sub-group, will collate, analyse the data and report areas of concern, risk or good practice to ASSAG. Annual reporting in this way allows for cumulative assessment of performance across Wales and comparison between health boards (and nations if possible) and encourages continuous improvement planning.

d) Due to the low incidence and varied and complex nature of the patient pathway for diagnosis of significant hearing loss, it is recognised that a number of the KPIs cannot be easily reviewed on the basis of data alone. Therefore, the group recommend the instigation of an annual professional quality assurance event at which case studies can be shared and peer reflection, challenge and sharing of good practice encouraged. This type of event is already in place for Auditory Implantable Device Services and Newborn Hearing Screening Wales. More generally, it is also known that a level of scrutiny to individual case level has been found useful to achieve in depth exploration of service quality, that might not be revealed from aggregated KPI data alone. The adoption of case level audit into routine use at local and national level offers a useful methodology to augment more empirical data driven approaches – also encouraging a more reflective and open approach to scrutiny by respective teams.

1.3 Positive Predictive Value PPV

When applied to newborn hearing screening and subsequent diagnostic ABR assessment, the PPV provides the proportion of babies referred from the screen who are subsequently confirmed with hearing loss by follow up diagnostic Auditory Brainstem Response assessment. This can be calculated for individual services, subject to an adequate sample size. Comparison of PPV rates between services provides a technical tool to reveal outlier performance worthy of further investigation. This has proven value in England, where those services which have the lowest outlying PPV rates have been revealed to have shortfalls in services quality, including but not limited to the quality of ABR assessment. In short, if applied in Wales it would offer potential intelligence on quality shortfalls that would complement other KPIs. Additionally, there might be enhanced value if PPV rates were compared between countries, although this is subject to adoption of similar primary screening processes – at present Wales follows a different primary screening regime. The calculation of PPV requires collation of data by PHW in collaboration with health board Audiology services and availability of an information systems able to support the necessary calculations.

2. Workforce

2.1 Effectiveness of standardised newborn hearing assessment and behavioural based hearing testing

The initial ASSAG response to Welsh Government recognises the difference between the newborn hearing assessment pathway in Scotland and Wales in that there is a long standing and robust external peer review process supporting Welsh Audiologists carrying out electrophysiological assessment on infants. There are also differences in the training routes employed by Welsh Health Boards with the Scientific Training Programme, the Higher Training Scheme and previously the Certificate of Audiological Competence taken up in a number of Health Boards. In addition, there are annual Newborn Hearing Screening Wales training days which are consistently attended, which address technical issues/errors identified from routine peer review to support improvements in quality of service provision. The task and finish group recognised though that there are differences in the training routes that have been taken by individuals currently carrying out hearing assessments for children under a developmental age of four and that the peer review process in particular for behavioural assessment is not well defined.

2.1.1 Workforce training survey.

An initial survey of both academic and clinical training and assessment routes was carried out by the group and the following findings observed.

For individuals performing independent diagnostic (ABR) assessment of pre-school age children, only 47% have completed externally assessed training, whilst 79% have completed M-level modules in paediatric Audiology. For individuals leading two-person behavioural based hearing assessment of pre-school age children, only 41% have completed externally assessed training, whilst 62% have completed M-level modules in paediatric Audiology. This indicates that there is a potential gap in the assurance of clinical skills.

2.1.2 Minimum Training Standards and Competency review option appraisal

Following this scoping exercise it was determined that both the workforce and users of our services would benefit from a consistent approach to minimum standards of training, assessment and competency review and it would serve to provide assurance regarding the quality of assessments and management decisions arising from those assessments to users and their representatives, Health Boards and Welsh Government. Therefore, building on the process and structures already in place in Wales, the group developed a set of minimum training standards and competency review options for electrophysiological assessment of infants and behavioural assessment of children less than 4 years developmental age. The options were presented to the Newborn Hearing Screening Programme Board and an option appraisal exercise carried out with Audiology Heads of Service, deputies and paediatric audiology leads.

A full report of the process used to develop options for minimum training standards and competency review and appraisal of those options can be seen in Appendix 4.

In all cases the appraisers agreed with the opinion of the Wales Lothian T&F group and, where relevant, the members of the NBHSW Programme Board that option 3 (tables below) is the option that provides appropriate assurance balanced against an increased cost and practical considerations. The preferred options for each category are summarised below. There may be some negative staff views to the introduction of external review for behavioural assessment and for increased requirements for training for electrophysiological assessment but it is thought that these can be overcome. It should be noted that the recommendations which are being made here

for all staff undertaking this work are similar to the current criteria in the children's quality standards for lead clinicians only. In England, this level of training has been recommended for immediate action for lead paediatric audiologists as an initial response to the issues being identified there. The task and finish group feel that robust minimum training standards for ALL staff working with children under 4 (developmental age) are key to assuring that the risk of incidents and concerns raised in Scotland and England is minimised in Wales.

Table 1. Minimum Training Standards for: Diagnostic electrophysiological assessment for neonates

Academic	Clinical Training	Clinical Assessment
All new staff <u>required</u> and **existing staff <u>encouraged</u>** to undertake M-level credit in Paediatric Audiology (unless already have MSc in Audiology)	**All staff <u>required</u>** to attend/have attended a recognised practical training course eg. Harrogate ERA course **New staff <u>required</u>**, and **existing staff <u>encouraged</u>**, to obtain HTS Paediatric Audiology– Newborn Assessment qualification **All staff <u>required</u>** to attend NBHSW Training Days which provide specific CPD (as arranged)	**All new staff <u>required</u>** and **existing staff <u>encouraged</u>** to pass formal external clinical assessment HTS Paediatric Audiology – Newborn Assessment **All new staff <u>required</u>** and **existing staff <u>encouraged</u>** to undertake Wales specific competency training eg on peer review** **already developed

Table 2. Minimum training standards for: Behavioural hearing assessment <4 years developmental age (ie. VRA/Performance Testing)

Academic	Clinical Training	Clinical Assessment
All new staff required and **existing staff encouraged** to undertake M-level credit in Paediatric Audiology or MSc in Audiology	**All staff required** to attend a recognised Paediatric Audiology practical training course of at least 1 day duration, **at least** every 5 years* **All new staff required**, and **existing staff encouraged**, to obtain HTS Paediatric Audiology qualification or STP (unless already have CAC) *may need to be developed or commissioned. HoS may wish to identify particular priority areas at a given time.	**All new staff required, and existing staff encouraged**, to pass formal external clinical assessment in Paediatric Audiology ie. HTS module (CAC / STP is an acceptable alternative, however for those with the STP qualification the addition of an at least 10 session secondment in paediatric audiology would be recommended.

Table 3. Ongoing competency observation for diagnostic electrophysiological assessment for neonates

What	How	Who and when

Statement in *Quality Standards for children's audiology* altered to include definition of what is to be reviewed for each clinical activity and methodology of review.	The functional document for the *Quality Standards for children's audiology to be reviewed to include:* a standardised formal procedure eg observation / discussion/reflection, including of case studies, for review as well as a standard proforma for each clinical procedure which may include elements of subjective review based on a 'positive psychology' or other methodology as well as 'tick boxes'. Define minimum requirements and good practice for the management of peer review outcomes within services.	Review by ***internal*** personnel who routinely undertake that clinical procedure for **all activity every 3 years** (unless undertaken externally) Review by ***external*** personnel who routinely undertake that clinical procedure **every 6 years**.

Table 4. Ongoing competency observation for behavioural hearing assessment <4 years developmental age

What	How	Who and when
Statement in *Quality Standards for children's audiology* altered to include definition of what is to be reviewed for each clinical activity and methodology of review.	The functional document for the *Quality Standards for children's audiology to be reviewed to include:* a standardised formal procedure e.g. observation / discussion/reflection, including of case studies e.g. later diagnoses, challenging cases or scenarios. Production of a standard proforma for each clinical procedure which may include elements of subjective review based on a 'positive psychology' or other methodology as well as 'tick boxes'. Define minimum requirements and good practice for the management of peer review outcomes within services.	Review by *internal* personnel ***'…at least every 3 years'*** who routinely undertake that clinical procedure for all activity (except when completed by external reviewer- see below) For 'high stakes' clinical activity ie VRA/ performance testing, review by *external* personnel ***'…at least every 6 years'*** who routinely undertake that clinical procedure

There is currently no external peer review in place for behavioural based hearing assessments of children being followed up after ABR assessment or otherwise. In part, this reflects technical challenges to peer review presented by this form of assessment. Additionally, there is thought to be little exposure to practice at other centres. Consequently, the consistency of such VRA based assessments in terms of adhering to professional good practice is unknown and a potential area of risk/concern. Aside from achieving good initial training/education standards (see below), supporting CPD in this area and improving local competency checking, this potential risk could be further mitigated through introduction of a national peer review scheme which would be a significant addition to the 6 yearly external observation recommended as a minimum here. The format of and requirement of that peer review, live or virtual though, is worthy of further exploration given the advances in technology.

The recommendations of the task and finish group are that the minimum training standards and competency review described above becomes the standard for all paediatric services in Wales carrying out these activities and that they are included in version 3 of the Quality Standards for Children's Hearing Services with immediate implementation across services.

The group recommends that a further task and finish group is convened to specify one, or more, recommended methodologies for ongoing observational competency checks. The exploration of a national observational peer review programme for visual reinforcement audiometry, although exceeding the minimum standard agreed in the option appraisal would be an important exercise.

Given the cost and practical implications of option 3 in all cases, an understanding of these implications will need articulating and ideally a commitment of financial support achieved in order that the recommendations do not have a detrimental impact on the ability of services to function. Services requiring support in order to reach the minimum training standards will need to work with HEIW, Health Boards and Welsh Government to achieve this support.

2.2 Work being undertaken outside of the T&F group

Outside of the task and finish group the Newborn Hearing Screening Programme has considered immediate actions that could be taken to provide additional assurance. The two actions already implemented are

1) A spot check review of peer reviews that contained no variations from standard by Programme Coordinators.
2) A peer review exam for audiologists newly training to undertake diagnostic assessment on babies referred by NBHSW and entering on to the peer review rota.

Work is also underway to consider a bilateral pass model for all babies undergoing newborn hearing screening. This would bring the service model in line with that elsewhere in the UK and allow for comparison of positive predictive value with the other home nations.

2.3 Workforce capacity

A work force survey completed by all Health Boards in Wales has demonstrated a wide variation in the full-time equivalent workforce attributed to paediatric audiology in each health board. It is difficult to make direct inference from this data as there are differences in the services provided and pathways by each health board, for example dedicated paediatric audiologist support to ENT, newborn hearing assessment services, paediatrician led community audiology services and differences in the proportion of hearing aid fittings to grommet insertion for glue ear. When these

difference are accounted for in principle though, differences still remain between the health boards. The optimum workforce to reach and maintain compliance with standard wait times hasn't been comprehensively scoped but a method of workforce planning developed has been published as part of the Independent review of Audiology services in Scotland [4] and could be used for reference.

2.4 Leadership

Whilst ensuring that clinicians performing paediatric hearing assessments referred to in this paper meet the minimum specific education and training requirements, it is also important that they have access to senior scientific leadership to oversee governance and provide direct expert advice on the management of the most challenging cases. Absence of ready access to such expertise presents a risk to patient management and outcomes. The Audiology service structures at health boards should reflect the need to have expert leadership and advice available locally or through formal network arrangements. The group have formed recommendations with regards to the skills, knowledge and competencies which it believes are critical to providing paediatric audiology services with strong leadership and support. These are outlined in Appendix 5. Following the anticipated publication of the British Academy of Audiology Scope of Practice document, further review of these recommendations may be indicated in the future.

3. National Infrastructure, reporting and collaboration

3.1 Audiology Quality Framework

In addition, aside to the work of the task and finish group, Audiology in Wales is developing a Quality Framework under which set of Audiology quality standards will sit. This Quality Framework will include reporting and escalation processes. This provides a framework into which the group can link their recommendations. The task and finish group have considered three recommendations to the broader framework. It is recommended that;

a) Key Performance Indicators are sited as a sub–section of the Wales Audiology Quality Framework distinct to the Quality Standards. The new School Entry Hearing Screening Pathway KPIs will also sit within this section.
b) Although it would be useful to keep the KPIs unchanged over time in order to collect and compare data over a number of years, it would be appropriate to review should KPIs also be developed in other home nations allowing for national benchmarking of data.
c) Once approved, the Welsh KPIs should be shared with the other UK countries with a view to encouraging adoption of a pan-UK set of KPI's.
d) The group recommend that the review of the Quality Standards for Children's Hearing Services should commence in January 2024 with a draft available for use by January 2025.

3.2 Digital improvement

Audiology services in Wales are currently using the Auditbase patient management system for clinic management and data collection. This system has been used for more than 20 years in Wales, and though has seen some improvements, its lack of connectivity to other Welsh NHS systems and the inability to collate data on a national basis, increases the complexity of data

[4] Independent Review of Audiology Services in Scotland - gov.scot (www.gov.scot)

reporting and the risk of variation and incomplete or erroneous data. The Audiology Data and Digital task and finish group and developed a proposal for the scoping of the needs of Audiology services. The Wales Paediatric Audiology Quality Assurance Task and Finish Group recognises the benefits of improving the data capabilities of Audiology services in Wales in order to improve data collection, reporting and benchmarking across Health Boards as well as improving communication between Health Board Audiology services in Wales and Implantable Hearing Device Centres. Therefore, the group recommends that the proposal to procure a scoping exercise on the data and digital system need of Audiology in Wales is supported by Health Boards, Digital Health Care Wales and Welsh Government.

In the shorter term, the development of a digital dashboard for reporting on local and national quality assurance outcomes and other KPI's would provide for ready access to and sharing of such up to date performance data – to guide early escalation of shortfalls. This core quality data might also be shared in the public domain to contribute to efforts to promote the hearing related needs of the population and Audiology services

3.4 Improving Quality in Physiological Services (IQIPS)

As described in the response to WG, there is a recognition of the role that *Improving Quality in Physiological Services* (IQIPS) has in providing quality assurance against Audiology services in the UK. Work has been undertaken comparing the structure and content of IQIPS to the Welsh quality standards and as a result the team reviewing the Quality Standards for Adult Audiology Rehabilitation will be including elements of quality assurance from IQIPS which are felt to enhance the Quality standards. Given that this work is being completed the T&F group did not feel that it would be prudent to duplicate this work, however it has made a recommendation that the review of the Children's Quality Standards should include the elements included in the new adult quality standards.

3.5 Welsh Government reportable waiting time standards

Heads of Audiology and members of ASSAG feel that the inclusion of Paediatric Audiology waiting times in the list of formally reportable waiting times priority is crucial to the raising of the importance of hearing services for children in Wales and allocation of resources to address. Delays in diagnosis of hearing loss reported at Lothian may have been related to shortfalls in assessments and clinical decision-making, however such delays could also occur due to delays to initial hearing assessments. Work to request that paediatric audiology waiting times are included is currently being taken forward by ASSAG. The task and finish group support the need for paediatric audiology waiting times to be recognised and monitored by Welsh government.

3.6 Patient experience measures

Although not addressed in the ASSAG response to Welsh Government, the task and finish group recognise patient experience as an important quality assurance measure. This work is being taken forward by Audiology Heads of Service group in order to develop a set of patient experience measures which can be measured consistently and compared across Wales.

3.7 Third sector collaboration

Currently third sector organisations are involved in the development of the quality standards. Within Wales they also contribute to the external assessment of health board performance against

the quality standards with specific scrutiny of criteria relating to the holistic patient experience. The expertise, value and objectivity that they bring to this process can also strengthen the recommended quality assurance event with elements of shared agenda. Continued attendance at forums where patient experience is used to guide improvement is important to promote joint working and benefit to patients.

Appendix 2

ASSAG response to Welsh Government following publication of the Lothian Paediatric Service review

Lothian response
to WG final version.

Appendix 3

Recommended Key Performance Indicators

Key%20Performance
%20indicators.docx

Appendix 4

Minimum training standards and ongoing competency review

Training and
competency checks

Appendix 5

Minimum competencies for scientific and clinical paediatric leads

Wales Paediatric
Audiology Minimum