

Peer Review

Aims

- **Improve** the quality of ABR testing
- **Standardise** the quality of Audiological electrophysiological assessment within the region
- Provide practical **support** to practitioners
- **Identify** areas of difficulty faced by practitioners in the region
- Enable **reporting** to national and local bodies responsible for QA that diagnostic methods are carried out to a sufficiently high standard.

Benefits

- Reduction of interpretation errors
- Reduction of management errors
- Reviewing improves own clinical practice
- Provides support for challenging cases
- Fosters confidence in a good service
- Gives parents greater confidence in the service

Benefits

- Benefit has been verified
 - “Identify adverse events” (Forster et al 2011)
 - “Sharpens event analysis” (Hitchings et al 2008)
 - “Significant improvement in clinical ABR practice” (NHSP 2011)

Potential Risks

- If too small a group, quality potentially limited
- Data security
- Clarification limits of reviewers' responsibilities
- Impact on working relationships

Model Considerations

- Transparency / Anonymity
- Internal / External
- Explicit / implicit training
- Time investment
- Patient Inclusion Criteria
- Reviewer Criteria
- Test Criteria
- Format Criteria
- Feedback Criteria

Documentation

- Evidence of Waveforms selection
- Waveforms sent
- Review Outcomes
- Information Governance Documentation
- Local Audit Registration

Process Audit

- Regular meetings of all sites involved to identify issues arising
- Evaluation of :
 - speed of turnaround
 - accuracy of reviews
 - impact on patient management

Template

A	B	C	D	E	F	G	H	I	J	K	L	M
For Tester Use	Site/Dept		Comments from tester re background / results / plans for further tests etc. <i>(Do not exceed cell width)</i>									
	Tester		Well baby. ABR at 1 week corrected age suggested severe bilateral loss but had considerable interference issues so results uncertain.									
	Case ID	Example										
	Reason for test	Newborn screen referral	Today bilateral flat loss confirmed. Tymps flat R & L. Impressions taken.									
	Newborn Screen outcome	NCR bilateral										
	Date of test (dd/mm/yyyy)											
	Corrected Age at test (weeks)	6	Aids fitted - for F/U at 8/12.									
	Over 48 hr in NICU/SCBU - yes/no	No										
	ABR AC Transducer / Stim Type	Insert / Pips										
	Outcome of ABR/any further action	PCHI management										
Date of next appt if any												
Date sent for review												
For Reviewer use	Reviewer name		Comments from Reviewer <i>(Do not exceed cell width; use separate rows)</i>									
	Date review returned to site		Good that you got 2 frequencies but RA requires replication, with noise <25nV. It is important to know if this baby has a conductive or sensorineural loss so I would urge you to consider bringing back for 4k BC. If need to aid take care with fitting as AC thresholds could be									
	Discussed with tester? yes/no	No	Note to reviewer: there are 6 rows above for your comments. Limit what you enter in each cell so that it can be read (no text is hidden), as in this example. These cells do not wrap the text.									
	ABR quality judgement	Improvement indicators										
Action required beyond planned?	ABR repeat											
ABR THRESHOLDS in dBnHL			RIGHT EAR				LEFT EAR					
Notes: Use =, <=, or > prefix If masking was used add (M) after the result e.g. =40(M) By convention, <=50 is taken as 'agreeing within 10dB' with =50 but <=55 (or more) is taken as not agreeing with =55 (or more) Agree within 10dB also requires agreement with standard Gold std requires = some threshold (or <=30eHL AC4kHz) Reviewer explanations may be added as comments - Hover mouse over cells with red corner to view comment			Air Conduction				Air Conduction					
			0.5k	1k	2k	4k	Click/CM	0.5k	1k	2k	4k	Click/CM
tester - result:			=80	=75			=75	=70				
Gold standard?			Yes	Yes			Yes	Yes				
reviewer - result:			<=80	<=75			<=75	<=75				
reviewer - agree within 10dB?			No	No			No	No				
			Bone Conduction				Bone Conduction					
			0.5k	1k	2k	4k	Click	0.5k	1k	2k	4k	Click
tester - result:												
Gold standard?												
reviewer - result:												
reviewer - agree within 10dB?												
Category			Indicator				Details <i>(Do not exceed cell width)</i>					
Improvement			Interpretation				Labelled RA but unreplicated waveform				4k Rt 70, 4k Lt 60, 1k Rt 75, 1k Lt 70. These do not qualify for RA.	
Improvement			Interpretation				Threshold recorded as = when should be <=				All. Without valid RA these must be reported as <=	
Improvement			Interpretation				Reported as Gold Standard but is not				All. Gold standard thresholds >30dB HL require an RA 5-10dB below	
Improvement			Interpretation				Mismatch between chart and eSP entry				4k Lt 70 marked Inc (correct) but reported as though it was CR	
Improvement			Interpretation				More than 2 traces overlaid				4k Lt 75 - makes estimation of residual noise difficult	
Improvement			Test Strategy				A further 2 waveforms, added pairwise needed to resolve				Additional traces for Lt 4k at 70 to resolve.	
Improvement			Test Strategy				BC would be helpful				Is this case conductive or sensorineural?	
Improvement											NB 'reviewer - agree within 10dB' is No (see cell A30)	
Improvement												
Improvement												
Improvement												
General / other Reviewer comments			This area can also be used for further comments by the reviewer if needed.									
Number of improvement indicators in each category							Outcome measures					
Admin			0				threshold: n agree n disagree % agree					
Parameters			0				reviewer: 0 4 0%					
Recording Quality			0				No of categories: 1					
Display			0				No of improvement indicators: 7					
Interpretation			5									
Strategy			0									
CM			0									

ABR Peer Review			
Relevant Sites			
Review number	AB123456		
Date of Review	01/02/2021		
Test Stimulus	Original Threshold (dBnHL)	Reviewer Threshold (dBnHL)	Comments
AC L 1kHz			
AC R 1kHz			
AC L 2kHz			
AC R 2kHz			
AC L 4kHz			
AC R 4kHz			
BC L 1kHz			
BC R 1kHz			
Outcome of Review			

Existing models

- Tea-and-biscuits model
 - Periodic meet up
 - Good for support and collaboration
 - Too slow for individual case management
- BSA model
 - Systematic send and receive
 - Training and moderation



Practice Guidance

Principles of external peer review of auditory brainstem response (ABR) testing in babies

Date: September 2019

Due for review: September 2022

BSA Recommendations

- People:
 - Rotating chair
 - Reviewers
 - Rotating
 - Practicing
 - Enough to cover sickness / leave
 - External moderation

BSA Recommendations

- Quick turnaround time <7 days
- Regular meetings between reviewers
- Process for mediation
- Annual report
- Anonymisation – with caveats
- Clarity of accountability
- Governance
 - Information governance
 - Clinical governance