Following VA's Best Practices for VES Audio Examinations

A Note From the VA Quality Team Audiologist:

"Due to the forensic nature of the medical disability exam, there are significant differences in test protocol and documentation as compared to a traditional audiology exam for medical diagnosis and treatment. A traditional audiology examination provides diagnoses for treatment purposes. A medical disability examination (MDE) requires diagnoses to prove whether or not a claimed disability actually exists. The disability examination must provide very specific information in order to ensure a proper evaluation of the claimed disability rather than to provide medical treatment."

--Deanne Adams, AuD, CCC-A

Failure to comply with this guidance will result in a provider error from VA.

Training Objectives

Over the past few years, contractor audio exams have slowly gained a reputation for being inconsistent with VHA audio exams. Whether due to mis-calibrated equipment or providers not following the DBQ instructions, contractor exam errors can lead to Veterans' benefits being set too high or too low, which in turn can have lasting negative impacts on our Veterans.

To combat this ongoing trend, VA has recently increased its scrutiny of contractor audiology reports. In some cases, these reviews have resulted in VA asking VES to suspend scheduling with audiologists after substantial quality errors were found in their reports, and only allowing regular scheduling to resume once the provider completes a full retraining.

This audiology training module was designed to ensure all VES Audiologists stay in good standing with VA, and submit accurate, high quality Hearing Loss and Tinnitus DBQs for our Veterans. The pages ahead include curated guidance from *The Handbook of Standard Procedures and Best Practices for Audiology Compensation and Pension Examinations.*

The full handbook is offered in your VES Provider Portal in the "Training by Specialty" Audiology menu).

Topics

Transducers

Use of TDH headphones is preferred; however, insert earphones may provide more accurate air conduction pure tone thresholds depending on the individual Veteran's ear anatomy and hearing loss. Note that correct insert size and insertion depth during placement is critical for accurate threshold measurement. Inappropriately-sized inserts, or shallow insertion depth, can cause inaccuracy in pure tone thresholds. Headphones may provide a more reliable threshold measurement as the potential variations for insert placement is not in question.

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Pure Tone Thresholds

- Air conduction audiometry must include the following frequencies: 250, 500, 1000, 2000, 3000, 4000, 6000, and 8000 Hz.
- Pure tones should be presented well below the expected threshold. Ideally, the starting point should be 0 dB HL.
- The examiner should avoid presenting supra-threshold cues.
- Pure tones are presented in ascending 10 dB steps until a response is obtained.
- The level is decreased by 10 dB and increased in 5 dB steps until a response is obtained.
- Threshold is defined as the lowest level at which responses occur in at least half of the ascending trials with a minimum of 3 responses at any single level.

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Pure Tone Thresholds (cont'd)

- No measurable pure tone response must be indicated with a "+" after the maximum allowable limit of the audiometer or the maximum permissible limit, whichever is lower (e.g. 105+).
- When one or more frequencies cannot be tested for reasons other than a failure to respond at the upper limits of the audiometer, CNT (could not test) should be entered in the Air Conduction chart in the 2364 for each frequency that could not be tested, and an explanation as to why the testing could not be completed should be provided in question 1-1-B in the DBQ.
- Clearly inaccurate, invalid or unreliable test results should be reported as CNT, rather than reporting the unreliable threshold. The specific reason why results were judged to be so must be clearly documented on the DBQ.

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Bone Conduction

- Bone conduction at all thresholds will be obtained when the air conduction thresholds are poorer than 15 dB HL at any frequency, or whenever there is a 15 dB or greater difference between air and bone conduction thresholds in the other ear.
- When indicated, bone conduction audiometry must be completed at all frequencies: 250, 500, 1000, 2000, 3000, and 4000 Hz. Other frequencies may be tested as appropriate.
- Testing should start below audible levels (0 dB), and an ascending Modified Hughson-Westlake procedure will be used to obtain thresholds. Pulsed pure tones are recommended. Warbled tones should not be used.
- If an appropriate level of masking cannot be introduced due to equipment limits, maximum permissible limits, or the risk of over-masking, the maximum masking level will be recorded with a "+" (e.g. 90+). This indicates that the pure tone threshold reported was obtained at the recorded masking level, and that the pure tone threshold might be different if more masking had been used.

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Masking

- Effective masking levels will be determined and noted on the audiogram.
- Appropriate levels of masking are described below:
  - Air Conduction: Masking is necessary when there is a 40 dB or greater difference (60 dB with inserts) when comparing the air conduction threshold of the test ear to the bone conduction threshold of the non-test ear at any frequency.
  - Bone Conduction: Masking is necessary when there is a 15 dB or greater difference between AC and BC thresholds of the test ear.
  - Speech Audiometry: Masking is necessary when there is a 40 dB or greater difference (60 dB with inserts) when comparing the presentation level of a test ear and the best bone conduction threshold in the non-test ear.
- If masking is needed but could not be done, you must provide the reason.

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Speech Recognition

- Speech recognition tests involve the presentation of approved monosyllabic words. Speech recognition must be obtained with a VA-approved recording of the Maryland CNC Test media such as *Speech Recognition and Identification Materials, Disc 2.0* or *Departments of Defense and Veterans Affairs Audiology Materials, Disc 1.0.*
- The purpose of speech recognition testing is to obtain the Veteran's best performance under *optimum, controlled,* and *reproducible* conditions. For this reason, deviation from the VA's requirements is disallowed.
- **Live voice presentation of speech stimuli is not allowed.**

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Speech Recognition (cont'd)

- Initial speech discrimination presentation is completed using a full 50-word list from the VA approved recording of the Maryland CNC test, not a 25-word list as is common in traditional clinical practice.
- Based on this score, the need to complete the M-PIF is determined. If the initial speech recognition score is 92% or less, the M-PIF is needed.
- The starting presentation level will be 40 dB higher than SRT. If it is not 40 dB you must explain why.
  - Please note this is not to be interpreted as the Veteran's "MCL" (most comfortable level).
  - The only acceptable reason not to use 40 dB would be if the level was beyond the Veteran's tolerance or 100 dB, or if the starting level was adjusted upward in order to obtain a level at least 5 dB above the threshold at 2000 Hz, due to a precipitous drop between 1000 and 2000 Hz.

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Modified Performance Intensity Function (M-PIF)

- This must be obtained when speech recognition performance is 92% or less.
- Present 25 words at 5-6 dB above and 5-6 dB below the starting level (which, again, is 40 dB above SRT or 5 dB above the threshold at 2000 Hz).
- If with either test the Veteran scores 94% or higher you can stop and test that at PB Max.
- If recognition performance improves less than 6%, then maximum word recognition presentation level has been obtained, and the maximum word recognition presentation level is the original starting level.

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Modified Performance Intensity Function (M-PIF)

- If recognition performance improves by 6% or greater on the ascending/descending presentation, then another test is required after adjusting another 5-6 dB in that same direction.
- Continue testing in either direction until performance no longer improves by 6% or more.
- A full list (50 words) is then presented at the maximum word recognition presentation level. The word recognition score at this level is reported in the PB Max box.
- Presentation levels will not exceed the Veteran's level of discomfort or 100 dB HL, whichever is lower.

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Example of a properly completed M-PIF:

SPEECH AUDIOMETRY

	RIGHT SRT		RIGHT SPEECH RECOGNITION						
	1	2	1	2	3	4	5	6	PBMAX
	30		78%	82%	76%				78%
LEVEL			70dB	75dB	65dB				70dB
LIST			3	1	2				3
MASKING LEVEL									
INTER-TEST CONSISTENCY (RIGHT): [X] Good [] Poor [] Fair									

This test was run with a 50-word list.

- Initial presentation (70) is 40 higher than SRT (30).
- The provider did ascending (75) and descending (65) presentations.
- Since a 6% increase did not occur, the previous presentation level is the optimal one.
- For this example, 78% at 70dB is the PB Max.
- The PB Max score is what autopopulates in the DBQ itself.

*Note if inter-test consistency is anything other than “Good,” you must give an explanation in the Comments.

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Example #2 Properly Completed M-PIF

SPEECH AUDIOMETRY

	RIGHT SRT		RIGHT SPEECH RECOGNITION						
	1	2	1	2	3	4	5	6	PBMAX
	25		88%	94%					94%
LEVEL			65	70					70
LIST			2	1					1
MASKING LEVEL									
INTER-TEST CONSISTENCY (RIGHT):	[X] Good [] Poor [] Fair								

This test was run with a 50-word list.

This example is illustrating only two lists were needed due to the score of 94% or better being reached on the second test.

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Example #3 Properly Completed M-PIF

SPEECH AUDIOMETRY

	RIGHT SRT		RIGHT SPEECH RECOGNITION						
	1	2	1	2	3	4	5	6	PBMAX
	25		82%	88%	90%				88%
LEVEL			65	70	75				70
LIST			2	3	1				3
MASKING LEVEL									
INTER-TEST CONSISTENCY (RIGHT): [X] Good [] Poor [] Fair									

This test was run with a 50-word list.

This example shows a situation where an additional ascending presentation was needed at 75 dB due to the improvement of 6% or more on the first ascending presentation (i.e. at 70dB). Since at 75 dB the score did not improve another 6+%, the 70 dB was used for testing PB Max.

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Stenger Testing

- The purpose of the test is to identify functional or nonorganic hearing loss.
- A Stenger test must be administered whenever pure tone air conduction thresholds at 500, 1000, 2000, 3000, or 4000 Hz differ by 20 dB or more between the two ears.
- Effective Stenger levels and frequencies will be noted on the audiogram and submitted in the Hearing Loss & Tinnitus DBQ examination report.
- Additionally, for a positive Stenger, you must report the Contralateral Interference Level, or CIL.
- Failure to note Stenger levels on the audiogram when required will result in a quality error.

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SRT-PTA Agreement

- The speech reception thresholds should agree with the 3FA (500, 1000, and 2000 Hz) pure tone average (PTA).
- When the SRT is lower or higher than the 3FA PTA by 10 dB or more, the examiner should suspect some degree of non-organicity.
- The following reference should be used to determine PTA-SRT agreement:

PTA - SRT Difference Agreement

+/- 5 dB HL Good

+/- 10 dB HL Questionable

> +/- 10 dB HL Poor

(From: Hodgson, W., Basic Audiologic Evaluation. Baltimore: Williams & Wilkins, 1980. P. 129.)

- If SRT is not within 10dB compliance with 3FA, you must provide an explanation in the Comments section.

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Additional Testing

- Acoustic Immittance (tympanometry and acoustic reflexes) testing must be performed to evaluate middle-ear function.
- At a minimum, the following tests will be reported:
  - Compensated dynamic acoustic immittance using a 226-Hz probe tone at pressures from +200 daPa to -200 daPa.
  - Peak compensated static acoustic immittance
  - Peak pressure in daPa
- When a seal cannot be obtained or there's an artifact present, you should use "CNT."
- Terms of "normal" and "abnormal" correlate to normative data of middle ear function, and not to the degree of hearing sensitivity.

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Additional Testing (cont'd)

- Acoustic Stapedial Reflexes
  - Ipsilateral reflexes and Contralateral acoustic (stapedial) reflex thresholds should be obtained if possible at 500, 1000, 2000, and 4000 Hz in both ears.
  - Absent reflexes will be indicated with a "+" after the maximum allowable limit (e.g. 105+) or the equipment limits, whichever is lower.
- Numerical data must be used rather than "Absent."
- If any reflexes are absent, the corresponding portion of the "Summary of Immittance (Tympanometry) Findings" in Section 1-1-F of the DBQ should be marked as Abnormal.
- **The maximum level of the reflex activating tone or noise shall not exceed 105 dB HL or the Veteran's discomfort level.**

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Hearing Loss

- The examination will be conducted without the use of hearing aids.
- Both ears must be examined for hearing impairment even if hearing loss in only one ear is at issue.
- Always solicit a detailed history of noise exposure before, during, and after the Veteran's military service.
- If any information reported by the Veteran is inconsistent with the records, please comment on this in the Remarks.
- If your current examination findings vary significantly from previous audio exam results in the Veteran's records, you must comment on the differences and offer your expertise on why the findings vary so greatly.

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Hearing Loss and Tinnitus Opinions

- Note that audiograms may routinely be performed for all audio evaluations, even if the Veteran is only claiming tinnitus.
- However, if only tinnitus is claimed, no opinion in Section 1 in the DBQ should be rendered for hearing loss, nor a diagnosis be given; in fact, you should leave the Hearing Loss section blank and include the audiogram results, if performed, in the Audiological Form only.
- An opinion on tinnitus is always desired even if not claimed up front as long as the issue hasn't already been addressed via the C&P process in the past, based on the records.
- No opinions should be rendered if the hearing loss or tinnitus is already service connected.
- Opinions on etiology of hearing loss and tinnitus must not be based on the Veteran's MOS alone. You must discuss all records reviewed to support the opinion, such as DD 214, enlistment and separation audiograms, post-deployment questionnaires, etc. Comments on any lack of relevant records is also necessary, such as when no separation records is available.

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3M Inserts

- Veterans with military service between 2006 and 2016 may have been supplied defective CAEv2 earplugs sold to the United States Military from 3M.
- Therefore, reported noise exposure during this period of service may have resulted in auditory system damage despite the use of earplugs being documented or reported.

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Diagnosing Hearing Loss Not Present In Service

- If you are diagnosing a hearing loss that was not present during the Veteran's military service, VA will not accept a rationale of a "delayed onset noise induced hearing loss."
- However, you can render a positive opinion based on other clinical findings of auditory damage while in service, such as tinnitus and/or transient threshold shifts.
  - Example: If a Veteran has normal hearing at separation from service now has a significant hearing loss 30 years later, and you believe it is due to the Veteran's MOS of infantryman, you would not want to state that the noise exposure 30 years ago caused the hearing loss today (aka latent onset). Instead, you would need to state the noise exposure 30 years ago *caused inner ear damage at the time of exposure*, and this damage was likely exacerbated by other life experiences such as subsequent noise exposure, aging, medications, and disease.
- A permanent threshold shift also means you can relate the hearing loss to service.
- It's important to cite articles discussing the damage of noise to the cochlear and the compounding effects of aging.

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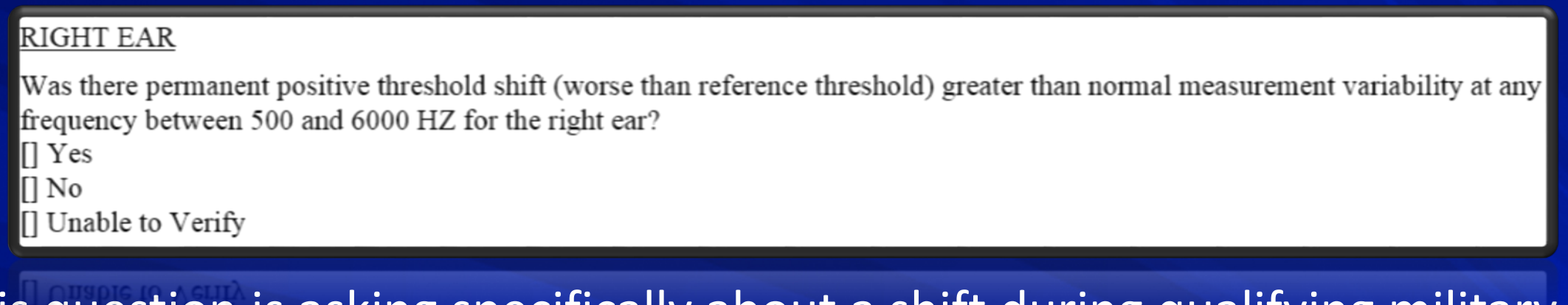
Significant Threshold Shifts



RIGHT EAR

Was there permanent positive threshold shift (worse than reference threshold) greater than normal measurement variability at any frequency between 500 and 6000 HZ for the right ear?

[] Yes

[] No

[] Unable to Verify

- This question is asking specifically about a shift during qualifying military service.
- The VA is only concerned about shifts between .5-6k, not 8k.
- They are also only concerned about *permanent* and *positive* shifts.
- You may only select the “Unable to Verify” option when either the entrance or exit audiograms are not available, voice whisper tests were used, or the same frequencies aren’t tested.

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Significant Threshold Shifts

- Determining presence of STS during service:
  - You'll need to determine whether there was a positive, permanent threshold shift (PPTS) at any frequency between 500-6000.
  - DoD defines a positive threshold shift as a shift of 15dB or greater at any frequency, or a shift of 10 dB or greater in the average across 2000-4000, in either ear.
- The question regarding PPTS is referring to a shift during the Veteran's military service, as it is seeking whether there is an indication of a shift supporting noise exposure or acoustic trauma.

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Pre-Existing Hearing Loss

Did hearing loss exist prior to the service?
[] Yes [] No

- This question should be answered based on the Veteran's entry audiogram. If an entry audiogram is not available, you should assume that a Veteran's hearing was within normal limits at the time of induction/enlistment unless there is evidence to the contrary; but it is important to indicate that it is an assumption.
- It is possible for a Veteran to have pre-existing hearing loss *and* hearing loss that is due to service.
  - How? The pre-existing hearing loss must only have been noted in the high frequencies (6000, 8000) and now is present in both the high and the low/mid frequencies.
- Otherwise, if HL existed in the low-mid frequencies prior to service, the "direct" service connection opinion should be "no" and any HL should be addressed as an aggravation of a pre-existing condition.
- It's important you provide a solid rationale for either scenario.

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Tinnitus

- It’s important to provide any available details regarding date and circumstances of onset, even if the Veteran can only recall the month/year/decade of onset.
- Please provide the progression of the Veteran’s tinnitus, if any.
- Please describe the tinnitus (beeping, whirring, whistling, etc.).
- If tinnitus is opined as a symptom of hearing loss, then the opinions regarding whether each condition is related to military service should be consistent (i.e. if HL is not due to service, yet tinnitus is due to service, then the tinnitus cannot be linked to HL).
- Refrain from using “cookie cutter” tinnitus descriptions or “cookie cutter” rationales across all of your reports. The VA notices this!

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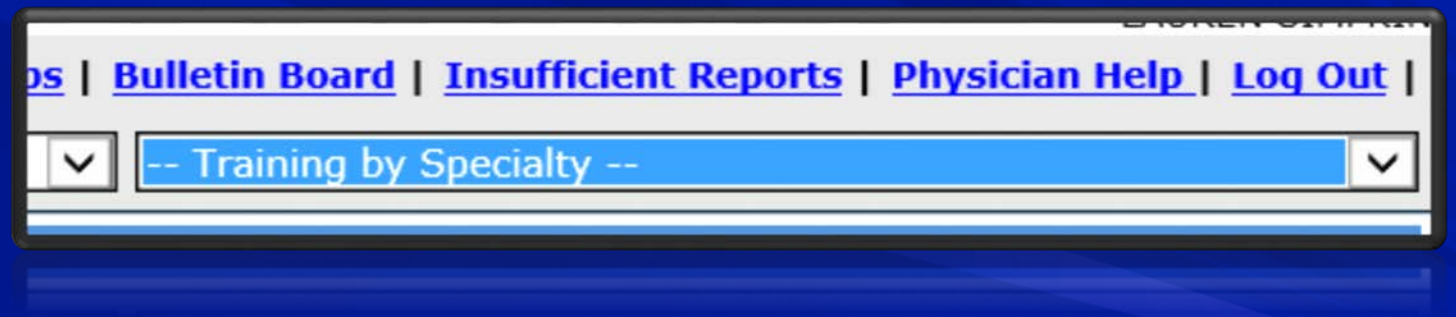
Miscellaneous Pro Tips

- Make sure your audiometer, impedance bridge, and all equipment used are calibrated on an annual basis.
- The maximum allowable limit for pure tones and acoustic reflex stimuli is 105dB, and the maximum allowable limit for speech testing is 100dB.
- Be sure to pause between words during speech discrimination testing.
- If your test results appear or are determined to be invalid, it's important you attempt to reinstruct the Veteran and retest. Make sure you also document these efforts in the report.
- You may not rely on the presence/absence of *compensable* hearing loss when giving rationales; i.e. don't render a negative opinion simply because the Veteran doesn't have HL at 3 different frequencies.

Available Resources

- There are many resources available in your VES Provider Portal under the “Training by Specialty” drop down menu:
  - *The Handbook of Standard Procedures and Best Practices for Audiology Compensation and Pension Examinations*
  - *Video tutorial*
  - *CNC Audio Files*
  - *MOS by Branch*
  - *Performance Intensity Function*
  - *Stenger Test*
  - *Testing Acoustic Reflexes*
  - *VES Provider Audio Guide*



- Vendor Guidance Memo 19-03 is available as a link at the top of the DBQ.

Available Resources (cont'd)

- Additionally, feel free to send us a message using the "Physicians Help" link at the top right corner of your portal
- Or e-mail one of our Medical Advisory Board Audiologists:
  - Dr. Lauren Simpkins at **northtxaud@gmail.com**
  - Kim Faulkenburg at **kfaulkenburg75@gmail.com**

We **thank you** for your time and efforts to complete the most accurate audio examinations possible for our Veterans and Service Members!