

The “Problem Audiogram,” the Occupational Hearing Conservationist and the Professional Supervisor

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Purpose

To (1) Discuss “problem” audiograms, including standard threshold shift; and (2) Delineate the responsibilities of the Occupational Hearing Conservationist and Professional Supervisor for follow-up audiometric monitoring.

Chapter Topics

- Problem Audiograms
- Standard Threshold Shift (STS)
- Identifying the Revised Baseline
- STS Follow-up Procedures
- Medical Referral
- Work-Related Hearing Loss
- The Role and Responsibilities of the Professional Supervisor
- Relationship between the Occupational Hearing Conservationist and the Professional Supervisor

An effective **audiometric monitoring program** involves much more than generating and storing **audiograms**. The information gathered from the audiometric session is helpful but only if it is reviewed and acted on appropriately. The employer is responsible for establishing and maintaining an effective audiometric monitoring program, and the **Occupational Hearing Conservationist** (OHC) and **Professional Supervisor** (PS) are responsible for understanding the audiogram and following up on the findings. The regulatory agencies identify which tasks may be performed by the OHC and specify that a PS has oversight of the audiometric portion of the **Hearing Conservation Program** (HCP).

The Council for Accreditation in Occupational Hearing Conservation (CAOHC) recognizes the benefits of a qualified professional to a HCP and has created certification for the PS. This credential is tailored for an eligible physician or **audiologist** with experience and expertise in **occupational hearing conservation**. To learn more about the criteria and credentialing process, contact CAOHC: www.caohc.org.

When working together, the OHC and PS can be of great value to both employers and workers. As OHCs become experienced

and as they work with their PS, they will gain confidence in their abilities to identify workers who need additional professional help and coordinate follow-up procedures within the framework of their roles. A critical responsibility is dealing with **problem audiograms**.

Problem Audiograms

It is usually the OHC’s responsibility, after coordinating with the PS, to determine the basic validity of the audiogram. The preamble to the 1983 Occupational Safety and Health Administration (OSHA) regulation (Appendix C of this manual) states that technicians are permitted a preliminary look at audiograms and that they must refer “problem audiograms or audiograms of questionable validity” to a professional reviewer for further evaluation.¹ The Federal Railroad Administration (FRA) also uses the term problem audiogram to indicate which audiograms require additional scrutiny by the PS [(227.109(g)(3)]. The Mine Safety and Health Administration (MSHA) regulation clearly states that the determination of audiogram validity is the responsibility of a physician, audiologist, or a qualified technician under the direction or supervision of a physician or audiologist (see MSHA regulation, Section 62.172 [Appendix F]).

The term problem audiogram is not well defined in regulations. OSHA² has offered examples of problem audiograms in a letter of interpretation: “Audiograms that show large differences in hearing thresholds between the two ears, unusual hearing loss configurations atypical of **noise-induced hearing loss** (NIHL) and thresholds that are not repeatable.” There is no single published, exhaustive list of **problem audiograms**; however, the OHC and PS can develop their own criteria. The following examples can be used as a starting point:

- STS (defined by the applicable regulatory agency)
- **Recordable/reportable** hearing loss (hearing shift caused by workplace noise exposure that is significant enough to report to a government agency).
- **Threshold** worsening at frequencies other than STS frequencies (eg, 2,000, 3,000, 4,000 Hz) that show progressive or fluctuating hearing as compared to **baseline** or previous audiogram