

Planning the Audiometric Monitoring Program

by: Richard Danielson, PhD, CPS/A, COL USA (Ret.)

Purpose

To consider topics of importance when initiating or improving an audiometric monitoring program

Chapter Topics

- Approaches to the Audiometric Monitoring Program
- Considerations for Program Design
- Audiometers and Equipment Used in an Audiometric Monitoring Program
- Audiometric Database Management Systems
- Audiometric Monitoring Environments and Ambient Noise Standards
- Audiometer Calibration
- Scheduling

Federal requirements specify that a technician, the Occupational Hearing Conservationist (OHC), who performs audiometric tests must be responsible to a Professional Supervisor (PS), which, by regulation, may only be an “audiologist, otolaryngologist or physician.” The OHC and the PS of the audiometric monitoring program play vital, but somewhat different, roles in effectively producing and handling audiometric data.

More often than not, the OHC ensures that things get done right using knowledge, skills, and abilities described in the Council for Accreditation in Occupational Hearing Conservation (CAOHC) Scope of Practice for an Occupational Hearing Conservationist (Appendix A). The OHC’s role includes maintaining records that confirm that all applicable requirements are met. The PS is responsible for oversight of the OHCs’ audiometric testing, recommends follow-up procedures, manages the audiometric database and determines the work-relatedness of an employee’s hearing loss.

While many companies have an OHC and PS on staff, smaller operations sometimes hire external sources to provide such services. Unless a licensed physician or audiologist is already connected to the company, the OHC must obtain the services of one of these professionals to serve as the PS. Two published versions of the scope of practice of a PS by CAOHC² and the American College of Occupational and Environmental

Medicine³ outline the PS’s responsibility to work with the OHC and supervise the audiometric program, ensure the adequacy of the audiometric environment, review audiograms, and determine follow-up actions.

In any case, the OHC and PS must understand and execute their roles with a clear understanding of the major components of an effective audiometric program. This chapter is intended to help the OHC and PS understand audiometric approaches, equipment and procedures used in occupational audiometry.

The OHC’s role, then, includes maintaining records that confirm that all applicable requirements are met. However, because these regulations reflect the minimum “standard of care,”* OHCs should be encouraged to not only meet regulations like those published by the Occupational Safety and Health Administration (OSHA)⁴ (see Appendix C) but to also tailor (with their supervising physician or audiologist) their company’s programs, based on local needs and institutional policies and procedures. Before undertaking a new **audiometric monitoring program**, it is wise to develop and obtain approval for a plan that considers features of audiometric equipment, audiometric database management software, and program conduct. This strategy will help anticipate expenditures and time requirements.

Approaches to the Audiometric Monitoring Program

There are two basic approaches to audiometric monitoring programs: the **in-house program** and the **contracted service**. Most OHCs are usually involved with in-house programs in which the company has purchased equipment such as an audiometer and audiometric booth accessible to workers (eg, onsite, in a plant’s occupational health clinic). Alternatively, OHCs may work for a contractor who provides audiometry services in mobile vans or an offsite clinic. The following advantages and disadvantages of these approaches should be considered when establishing a new program or considering program modifications.

*NIOSH has, for instance, published nonmandatory recommendations¹ for prevention of occupational noise-induced hearing loss that go beyond OSHA’s mandatory requirements⁴