

## When the OHC Goes Home ... What Next?

### The OHC's Guide to Establishing an Effective Hearing Conservation Program

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#### Part 1 in a series of 3: Defining an Appropriate Role for the OHC

As an OHC, you belong to a multidisciplinary team of professionals, each of whom is responsible for a different facet of the hearing conservation program. While some hearing conservation functions require specific skills, credentials, or education, there are many that may be assigned to any member of the team, particularly to those who have attended a 20-hour CAOHC-approved course. Roles for each team member may be crafted to accommodate the skill mix on the team and the amount of time each member is able to devote to hearing conservation. Your own personal role will depend as much on the composition of the team as on your educational background and other job duties.

This series of articles will discuss some of the responsibilities that may be assumed by *any* OHC who has attended a CAOHC-approved course, regardless of prior experience and educational background. By combining as many of these responsibilities as is practical into a single role, the OHC can become a visible and effective focal point of the program, even managing the efforts of those team members who perform the specialized functions for which specific skills or credentials are required. There is no educational or experience prerequisite for managing a hearing conservation program, so an OHC who is excited about hearing conservation should think about expanding the scope of the job to provide more personal challenge and job satisfaction while providing better service for the program's constituency.

#### The hearing conservation team

The hearing conservation team will usually include a mix of professionals, depending on the size and nature of the organization and the personnel and financial resources that are available to support the hearing conservation program. At a minimum, the team should include a Professional Supervisor (who must be either an audiologist or a physician), one or more persons who are specifically trained in noise measurement and noise control engineering (such as a noise control engineer, industrial hygienist, or safety engineer) and an audiologist (and often an otolaryngologist) to whom employees may be referred for follow-up when the Professional Supervisor determines that the audiogram indicates the need for further evaluation. Some of these team members may be full-time employees who are devoted to the hearing conservation program, but in most instances they will be part-time resources, some of whom are consultants contracted to provide short-term support as needed.

After meeting these minimum program requirements, the remainder of the program's functions may be assigned to the other team members in any number of ways, depending on the size of the team and pragmatic considerations such as individual workload, relevant educational background, and personal strengths. Of course, those team members who are involved in the audiometric monitoring program should have attended a CAOHC-approved course and obtained CAOHC certification. Although it is not absolutely necessary for all members of the team (other than those who are conducting audiometric testing) to be CAOHC-certified or to have attended a CAOHC-approved course, a uniform level of training will ensure consistent and high-quality delivery of services and reduce the likelihood of conflicts between the various elements of the program.



*Implementing an effective hearing conservation program is a team effort.*

#### An appropriate role for the OHC

Often, the CAOHC-trained OHC (who may assume, either intentionally or by default, many of the remaining program functions in addition to audiometric testing) is the only full-time or nearly full-time team member, and sometimes he or she may be the only one who is located on-site. In many cases, the involvement of the other team members revolves around this OHC and is activated and coordinated by the OHC, who then functions as the Hearing Conservation Program Manager.

Although CAOHC training will prepare the OHC to take an active role in many areas of the hearing conservation program, there are some limitations that should be observed by the OHC and his/her management when defining the OHC's role. First, although the OHC may function as the manager of the overall hearing conservation program, the *audiometric monitoring* portion of the program must have an

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acknowledged Professional Supervisor who is either an audiologist or physician. The Professional Supervisor and the Hearing Conservation Program Manager work together, and their roles are complementary. Defining and understanding these two roles and their intended relationship is a critical step in the establishment of an effective hearing conservation program. This topic will be discussed further in the next installment of this series.

**Elements of an effective hearing conservation program**

A successful hearing conservation program is a multidisciplinary and multifaceted enterprise. By design, it cannot be completely and effectively (or legally, for that matter) maintained without the involvement of at least three people, as discussed above. By necessity, it often involves far more than these three or more specialists, whose contributions, while critically important, account for only a small percentage of the total program workload. The remaining program responsibilities may be divided up among the remaining team members in accordance with all of the factors that influence the organization's staffing decisions.

The elements of an effective hearing conservation program are:

- Audiometric testing
- Selection, provision and fitting of personal hearing protection
- Employee and management training
- Program administration and management
- *Audiogram review, referral, and follow-up*
- *Area noise monitoring and personal dosimetry*
- *Noise control engineering*

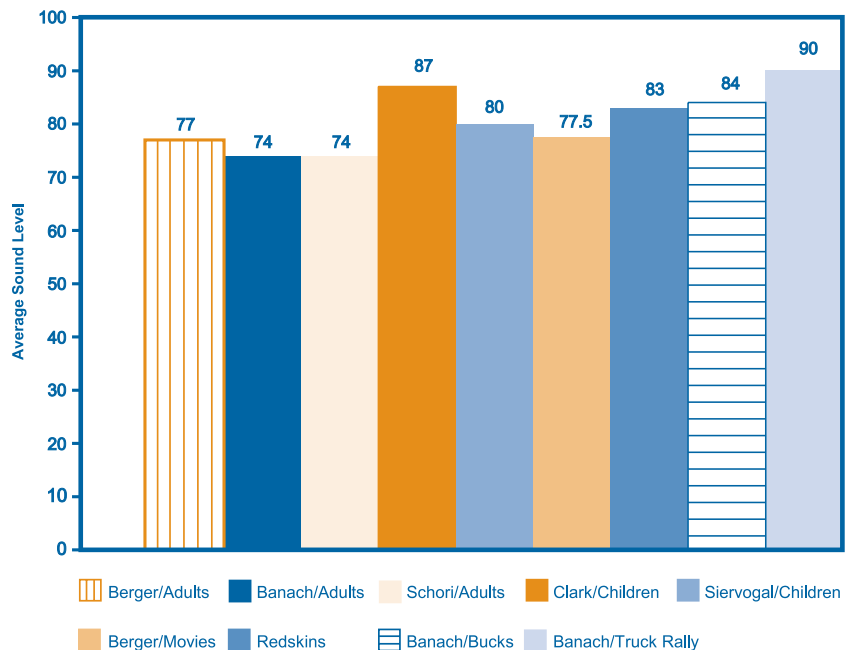
With the exception of the italicized elements above (which require additional specialized training), the other functions provide ample opportunities for the CAOHC-trained OHC and any other team members. Future installments in this series of articles will discuss selected program elements in detail and provide suggestions on how they may be effectively implemented in the context of the overall program. Particular emphasis will be placed on defining an appropriate role for the OHC in each area and on how the OHC may combine some or all of these responsibilities into an effective and comprehensive program management position.

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To be sure, we find quiet times and not every non-occupational or non-noisy occupational experience is a loud one. Yet there is a growing set of information that suggests we need to give the "quiet" world a serious look. More sampling is needed to get a better perspective on exposures beyond OSHA- or MSHA-regulated workplaces.

To put it all in perspective, it is worth recalling that in the now classic U.S. Environmental Protection Agency (EPA) Levels Document, scientists estimated that in order to protect virtually the entire population ("with an adequate margin of safety") from any significant noise-induced permanent threshold shift (i.e.,  $\leq 5$  dB at 4 kHz) exposures would have to be limited to levels not exceeding an  $L_{eq}(24)$  of 70 dB. So perhaps indeed, our non-occupational age-related hearing loss isn't all just due to the aging of the organism.

**References:**

- Berger, E.H. and Kieper, R.W. (1994). "Representative 24-hour Leqs Arising from a Combination of Occupational and Non-occupational Noise Exposures," *J. Acoust. Soc. Am.* Vol. 95(5), Pt. 2, May, p. 2890
- Clark, W.W. (1994). "School-related noise exposure in children," *Spectrum* Suppl. 1, 11, 28-29.
- EPA (1974). "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," Rept. 550/9-74-004, Washington, D.C.
- Epstein, K. (2000). "Sound Offense, No Defense," *Washington Post*, December 19, 2000, Health 9-15.
- Schori, T.R. and McGatha, E.A. (1978). "A real-world assessment of noise exposure," *Sound and Vibration* 12(9), 24-30.
- Siervogel, R.M., Roche, A.F., Johnson, D.L., and Fairman, T. (1982). "Longitudinal study of hearing in children II: Cross-sectional studies of noise exposure as measured by dosimetry," *J. Acoust. Soc. Am.* 71(2), 372-377.

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## When The OHC Goes Home . . . What Next? The OHC'S Guide To Establishing an Effective Hearing Conservation Program

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### Part 2 in a series of 2: Expanding the OHC's role in the hearing conservation program

*Editorial Note: This article was planned for presentation in 3-parts [see reference next page]. The content has been edited to two parts.*

This is the second installment in a two-part series of articles about the CAOHC-trained OHC's role in a comprehensive hearing conservation program (HCP). For most OHCs, activities related to audiometric testing occupy the bulk of their day-to-day duties. However, there are many roles beyond audiometry that may be effectively assumed by a CAOHC-trained OHC. This installment will discuss several functions that may be performed by CAOHC-trained OHCs in the context of an occupational hearing conservation program.

### The OHC works with the Professional Supervisor and other professionals

In the first installment in this series (Cooper, 2003), we reviewed the elements of a hearing conservation program and discussed the need for at least two (and probably three) members on the hearing conservation team. By law, an audiologist or physician must serve as Professional Supervisor (PS) of the audiometric monitoring component of the hearing conservation program. Often, there is also an additional audiologist and/or otolaryngologist who provides follow-up consultation for those cases referred by the Professional Supervisor. The third essential member of even the most skeletal hearing conservation team is a qualified noise control professional, who could develop engineered solutions to noise exposure problems (and who may also handle noise exposure assessments as well). With those exceptions, a CAOHC-trained OHC can pick and choose liberally from among the vast collection of duties and responsibilities that comprise a comprehensive hearing conservation program, combining them into a visible and satisfying position as the focal point of the program.

### The OHC's primary role is in the clinic

The fundamental aspects of the OHC's role consist of duties associated with conducting air-conduction audiometry, including baseline, annual, and retest exams. These exams should include a visual and otoscopic inspection of the ear (prior to audiometry) as well as taking an otological history, all of which are often performed by the OHC. The OHC may screen audiograms for review by the Professional Supervisor, based on guidelines provided by the PS.

Daily care and calibration of audiometric equipment is also typically the responsibility of the OHC, as should be the maintenance of equipment calibration records and the scheduling and documentation of other periodic equipment calibrations, per regulatory requirements. Finally, the OHC

can schedule and document the annual assessment of ambient noise levels in the testing environment, although the assessment will most likely be made by an industrial hygienist or other qualified team member.

### Reasonable limitations on the OHC's role protect both the OHC and the employer

Unless the OHC has other specific training in audiology, the OHC's involvement in hearing testing is limited to pure-tone air conduction testing. Furthermore, CAOHC training does not prepare or qualify the OHC to interpret audiograms, to determine work-relatedness, or to diagnose hearing problems or medical conditions. OHCs who work closely with their audiometric monitoring program's Professional Supervisor will find that there is a natural division in responsibilities that accommodates both the limitations on the OHC and the specific responsibilities of the Professional Supervisor as defined by the Professional Supervisor's Scope of Practice (see CAOHC website for OHC Scope of Practice at <http://www.caohc.org/scopeofpractice.html> and the Professional Supervisor Scope of Practice at: <http://www.caohc.org/professionalsupervisor.html>). Whether the PS and OHC work together in the same physical location or are separated geographically, the OHC *must* act with the direction and support of the Professional Supervisor, despite organizational and geographic challenges that may complicate the working relationship.

CAOHC-trained OHCs who take their responsibilities seriously will understand the importance of the training they've completed and will not attempt to "train" other OHCs in lieu of their attending a CAOHC-approved training course. Additionally, OHCs will not allow the unauthorized use of their personal CAOHC certification number.

### OHCs may expand their clinic role into program management

Despite the limitations on the OHC's role and the requirement for a qualified Professional Supervisor, there are ample opportunities for OHCs to become more involved in the management of the hearing conservation program and to contribute in a quantifiable way to the success and regulatory compliance of the audiometric monitoring element of the program. In particular, management of an audiometric database is an important responsibility that dovetails well with the OHC's other job functions and is one that has a direct impact on the success and regulatory compliance of the overall program. Tracking exam dates, scheduling annual audiometric exams and retests, and notifying employees regarding the results of audiometric exams can present a rigorous challenge, particularly in larger programs. Whether or not the goals are acknowledged and vigorously embraced

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by the employer, they can be daunting for any OHC: attaining 100% participation in annual testing and achieving complete follow-through on employees who have demonstrated an STS. In addition to scheduling and conducting the audiometric exams, the OHC's role can include preparing associated documentation and satisfying regulatory record-keeping requirements, as well as developing and reporting performance and regulatory compliance metrics for the audiometric monitoring program.

### **The OHC can become the recognized "face" of the Hearing Conservation Program**

Although the Professional Supervisor of the audiometric monitoring component of the program must be an audiologist or physician, that person need only be involved in the clinical aspects of the hearing conservation program. The CAOHC-trained OHC is appropriately qualified and often well-positioned to function as the focal point for the management of the overall hearing conservation program. An OHC who is excited about hearing conservation will likely want to consider an expanded role that provides opportunities to work with the other members of the hearing conservation program team. For instance, the OHC can be responsible for notifying industrial hygiene and/or safety personnel when an STS has been demonstrated by an employee assigned to a particular work area. More importantly, the OHC can then coordinate the successful implementation of whatever follow-up actions are appropriate, including investigative noise exposure assessments and any resulting noise control engineering interventions. The importance of a central focal point cannot be underestimated, since the interdependence of employee audiometric test results and noise exposures can be positively affected only if it is understood and acknowledged by all program stakeholders.

The OHC's role as the "face" of the hearing conservation program is most important when interacting with the program's constituency (the noise-exposed employees). Although much of the follow-up activity will take place between the employee and an audiologist or physician when an STS has been identified, OHCs who desire more direct contact with their constituents will seek to further expand their responsibilities to include providing the counseling that is required by law for employees who have demonstrated an STS. This conversation affords a critical opportunity for the OHC to affirm the credibility of the hearing conservation program and to positively affect the life of an employee; the credibility and care with which this counseling should be offered cannot be overstated.

### **CAOHC training prepares OHCs to assume significant and visible responsibilities outside of the clinic**

By virtue of their CAOHC training, OHCs are uniquely qualified on the hearing conservation team to assume responsibility for selecting, fitting, dispensing, and monitoring the use of personal hearing protectors in the workplace. In addition, the employee counseling that follows the identification of an STS includes providing and/or refitting personal hearing protection.

Undoubtedly, the most exciting opportunities for the OHC to influence the success of the hearing conservation program involve developing and conducting annual hearing conservation

training for noise-exposed employees and their management. The OHC's position as the focal point of the program provides both the authority from which to speak and a vantage point from which to compile a comprehensive training session that speaks to all of the elements of the hearing conservation program in a way that motivates and educates both employees and management.

As with the audiometric monitoring element of the program, there is the need for disciplined and capable scheduling and tracking of hearing conservation training so that all exposed employees receive annual training that meets regulatory requirements. Likewise, the need exists for developing and reporting metrics that quantify regulatory compliance with hearing-conservation-training attendance requirements. There is some economy of scale associated with combining the two databases so that training and audiometric monitoring compliance are managed by the same person.

The exact composition of a particular OHC's job will depend on the organization of the hearing conservation program, the composition of the hearing conservation team, and the particular interests of the OHC. CAOHC training provides ample options and flexibility for OHCs to fully participate in and, often, to manage the hearing conservation program. An OHC who seeks personal challenge and increased job satisfaction may want to consider a more comprehensive role in the implementation and management of the hearing conservation program. Whatever the roles offered to the OHC by their supervisors, and whatever increased roles are sought by the OHC, CAOHC encourages the highest level of professionalism possible in hearing conservation efforts. Everyone's roles are vital!

### **References:**

Cooper, BA (2003). "When the OHC Goes Home...What Next: The OHC's Guide to Establishing an Effective Hearing Conservation Program" Part 1, UPDATE, 15(1), p. 4 and 6.

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