



UPDATE

The Newsletter of the Council for Accreditation in Occupational Hearing Conservation

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Chairperson's Message

by Jeffrey C. Morrill, MS

CAOHC Council Member Representing the American Industrial Hygiene Association



During the early years at the *Intersociety for Hearing Conservation* and CAOHC, the training emphasis was almost

entirely on audiometric testing. Audiometric testing *does not* prevent hearing loss, it can only identify the presence of loss or the occurrence of changes. It was not uncommon before the OSHA amendment in 1983 to simply *file away* the audiograms. The practice of filing audiograms in the employee's personnel records without proper review and follow-up may have been due to ignorance 20 years ago, but today it is considered *cover-up*.

This issue of the *UPDATE* is devoted to the importance of audiological evaluation and follow-up for employees with either hearing

loss or change in hearing. Clinical audiology and medical ear specialists are available in almost all communities today. These professionals should be an integral part of the hearing conservation team for your company; however, it is important to meet with them personally and educate them on the details of your hearing conservation program.

Noise induced hearing loss can be an inappropriate and costly diagnosis in the absence of reliable information on the workplace noise exposures, work history and hearing conservation practice. The audiologist and ear specialist must be informed about the noise levels, individual dosimetry readings, type and availability of hearing protection, and the training and supervision of hearing protection use. In fact, it is ideal to get them into the plant to personally observe what is going on prior to seeing employees that you are referring to them.

Since hearing aids are often the only means to help an individual with hearing

loss, you can expect the employee to ask about hearing aids. It is also important to communicate to the audiologist what your company's policy is on hearing aid purchase. The scenario is a sensitive one if the employee thinks the hearing loss is due to the workplace and the audiologist or medical ear specialist does not understand what the company policy is. This can be avoided with proper advance planning and instructions in the referral.

With the OSHA regulation being in front of industry for nearly 25 years, noise should not be a significant factor in the occupational setting. However, poor hearing conservation practices, non-occupational noise exposures, prior employment exposures, and compensation mentality can all complicate the evaluation process. If your documentation is good and you have established a relationship with your professional partners, referral should be uneventful and in the interest of improving the employee's health and your company's safety and productivity.

Getting Management Support for Hearing Conservation Programs

Jill Niland, CIH CSP

CAOHC Council Member Representing the National Safety Council

Any safety professional or industrial hygienist who reads the professional or trade journals will be able to tell you that a significant portion of their content is devoted to what is perhaps the most important and recurring theme in safety or IH professional practice—getting corporate or facility management support. Support of a particular part of the safety program or the entire larger safety program means allotting it the XX dollars or other resources required to get it running, keep it going and make it successful. It is clear that other health professionals, such as audiologists who work in industry, have the same concern. All of us who deal with hearing conservation programs know that these can be a "hard sell" for a number of reasons. In the ideal

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UPDATE

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"SELECTING HEARING PROTECTION" GUIDE

One of CAOHC's goals is to provide education and information in occupational hearing conservation. CAOHC has purchased the printing rights to 7 practical guides from the National Hearing Conservation Association.

CAOHC will print one new brochure from the NHCA series in this and upcoming issues of the *UPDATE*. We hope that you will find this comprehensive brochure helpful in your hearing conservation efforts. See Page 3 to contact NHCA for additional copies.

LEGISLATIVE POSITION - STATE OF TENNESSEE

CAOHC was recently made aware that the intent of the Tennessee Audiology Licensing Law was not clear regarding CAOHC certified Occupational Hearing Conservationists when providing hearing testing in industry in the state of Tennessee.

On June 5, 1997 the Tennessee Board of Communication Disorders and Sciences approved and adopted the following policy statement as written:

"It is the position of the Board of Communication Disorders and Sciences that individuals certified by the Council for Accreditation in Occupational Hearing (CAOHC) providing hearing tests in industry that are within the scope of their duties as described by CAOHC and who are responsible to an audiologist or physician, licensed to practice in Tennessee, as described by T.C.A. 63-17-103(5)(A) or T.C.A. 63-17-114(8) or T.C.A. 63-17-114(5)(A) are not in violation of T.C.A. 63-17."

If you have any questions or concerns regarding this policy statement, please contact your Professional Supervisor or your CAOHC Course Director.

Q & A

Question: Another OHC recently told me that I need to be licensed as an audiometric technician in my state. Is this true?

Answer: *The answer to this question depends on your state. There are a number of various state government agencies which may claim jurisdiction over your actions as an Occupational Hearing Conservationist (OHC).* For example, state Departments of Labor in Oregon and Washington require CAOHC certification for OHCs. The Department of Health in Texas requires registration of all audiometric technicians, including OHCs. More commonly, state medical and/or audiology licensure boards may have special requirements for your professional supervisor in regard to "support personnel". That is, your state's audiology board may require that licensed audiologists register OHCs as "audiology aides". Likewise, OHCs operating under the supervision of a physician are typically subject to your state's medical practice laws.

To find out more about your state's licensure requirements, contact your supervising audiologist or physician.

COURSE DIRECTOR WORKSHOP

Plans for the October 10, 1997 Course Director Workshop are being finalized. This workshop is being held at the Denver Embassy Suites - Denver International Airport. The workshop is designed for Course Directors who are planning to initially certify or recertify thru the workshop method. Objectives of the workshop are: 1) Attendees will be able to list the activities the course director needs to do before, during and after hearing conservation courses to ensure successful training according to CAOHC guidelines. 2) Attendees will be able to identify course requirements and procedures related to certification of occupational hearing conservationists and course directors by CAOHC. 3) Attendees will be able to identify contemporary issues of hearing conservation programs, which are to be included in hearing conservation courses.

Deadline for application is September 10, 1997. Registration for the Workshop remains open until the first week in October. Please contact the CAOHC office if you are interested in becoming a CAOHC Course Director or are a Course Director needing to recertify through the workshop method.

Health & Safety Checklist for Mobile Hearing Test

Entry/Exit

- Door must open outward
- If there are more than two steps into the unit, a stair railing should be in place
- Mobile units greater than 20 feet in length should have two emergency exits

Fire Protection

- Unit must have an ABC fire extinguisher to accommodate paper, flammable liquids and electrical fires
- Extinguisher must be appropriately sized for unit
- No storage of flammable liquids or materials inside the unit

Electrical

- Electrical system shall be permanent wiring with voltage and wiring gauge sufficient to handle amperage draw for all on-board equipment
- Polarity between mobile unit wiring and site power source should be verified at each move
- All electrical systems and mobile unit must be properly grounded
- Service/circuit breakers must be labeled by function
- Generator or dual system (generator & external power) power must be installed per NE Code
- Install all electrical cords to preclude trip hazard
- A separate fire extinguisher is required at the generator's location
- Gasoline must be stored only in approved containers
- Generator may not be fueled while running
- Sites may require a flame permit for generator use

Sanitation and Infection Control

- Locate unit near restrooms and/or supply hot and cold running water
- Do not place earphones on an open wound; however sanitary elasticized phone bonnets may be used on earphones and changed between clients when open wounds are present
- Wipe earphones, response buttons, patient seating areas periodically with a sanitizing solution
- Use disposable eartips for otoscopic examination or sanitize the tips after each use

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Selecting a Partner for Hearing Conservation

A Hearing Conservation Service Provider should be more than a vendor - they should be your partner in hearing testing and hearing conservation issues. Selecting the right partner can be the most important decision you make regarding the hearing health of your employees.

The materials contained here were generated by the NHCA's Mobile Hearing Testing Guidelines ad hoc committee. The committee's goal was to develop quality assurance guidelines to help industrial customers select a high quality, reliable hearing conservation service provider.

The guidelines contained herein are based on the professional consensus of NHCA members providing hearing testing across the nation. They do not necessarily reflect the requirements of any state, federal, or other regulatory or governing body.

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For more information, contact:

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Printed on recycled paper

NHCA thanks Mary McDaniel, Ad hoc Committee Chair, for her comments and editorial contributions to this project. 2.96

A practical guide to:

Mobile Hearing Testing and Selecting a Provider



National Hearing Conservation Association

*The mission of the
National Hearing Conservation Association
is to prevent hearing loss due to noise
and other environmental factors
in all sectors of society.*

The Who, What, and How of Selecting a Hearing Testing Service Provider

This list of considerations is designed to help you select the best hearing conservation partner for your needs. Qualifications and experience of the testing staff, equipment calibration and testing range, ambient noise conditions, and safety issues can make a difference in the integrity and effectiveness of your hearing conservation program.

Testing Personnel — Experience & Supervision

Testing shall be administered by an audiologist, an Occupational Hearing Conservationist (OHC) who is certified by the Council for Accreditation in Occupational Hearing Conservation (CAOHC), or a qualified physician.

Following CAOHC course certification, the OHC should be closely supervised for a period of three months (minimum of 300 tests) to ensure the OHC's ability to administer testing, check and fit hearing protection and identify problem audiograms.

On completion of this three month period, the OHC's performance should be evaluated by the supervising professional in the areas of:

- audiometric testing
- obtaining case history
- understanding the basic concepts of hearing conservation,
- identifying problem audiograms
- handling day-to-day operations of the audiometric testing program
- the mobile testing unit itself

Subsequent annual performance evaluations of the OHC should be conducted to assess the areas of:

- audiometric technique
- audiometer care and calibration
- recordkeeping and follow-up procedures
- working knowledge of the OSHA Hearing Conservation Amendment

The OHC should be supported by the supervising professional with ongoing, continuing education opportunities.

Testing Equipment - Calibration and Range

An annual exhaustive, electroacoustic calibration is required for each audiometer and should include pre and post adjustment levels. Providers with multiple audiometers must

maintain equivalence of calibration among audiometers to ensure test reliability.

A listening check and a biologic calibration, using a bioacoustic simulator or standard test subject, with accuracy ± 5 dB, is required prior to each day of testing or whenever the mobile unit is moved (whichever is more frequent).

The OSHA specified standard stipulated a minimum testing range of 10-70dB. An overview of audiometer testing range in recent years and the incidence of hearing loss in the higher frequencies in excess of 70 dB warrants a revision of these levels. The proposed minimum test range is:

0 dB to 90 dB

When a baseline test result is not obtainable at maximum power output (MPO) of the audiometer and the MPO is 90 dB, further testing is recommended using an audiometer with a minimum MPO of 100 dB (110 dB preferable).

Monitoring Ambient Noise During Testing

There are several ways to monitor and minimize the effect of background noise levels on thresholds in a mobile testing unit.

- Conduct a check of background noise levels at every location using a calibrated Sound Level Meter with an Octave Band Filter.
- Continually monitor the noise levels in the testing area with a bioacoustic simulator with room microphone attachment.

The OSHA 1910.95 levels of Table D-1 Maximum Allowable Octave-Band Sound Pressure Levels for Audiometric Test Rooms are:

Hz	500	1000	2000	4000	8000
dB	40	40	47	57	62

The OSHA specified background noise levels may be too lenient, while the ANSI S3.1-1991 American National Standard-Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms may be too stringent for mobile applications.

To ensure that hearing tests are not adversely influenced by excessive ambient noise masking, NHCA suggests adhering to the ANSI S3.1-1991 standard, but allowing a +5dB factor to be added to the 500Hz level as indicated below:

Hz	500	1000	2000	4000	8000
dB	24.5	26.5	28.0	34.5	43.5

Mobile Unit Location and General Considerations

- NO SMOKING signs should be posted in unit and at generator location.
- EXIT sign(s) with direction arrow must be posted and clearly visible to those exiting the test booth.
- Unit should be parked on level terrain with braking system applied AND back wheels chocked to prevent rolling.
- Entry/Exit should be positioned away from high traffic areas.
- Battery powered emergency lighting is necessary if the unit has no windows.
- Climate should be controlled to 68 to 80F. The mobile unit should not be parked near industrial plant exhausts to prevent the intake of contaminated air.

Health and safety considerations are very important. Use the checklist to make sure your employees are safe!



Otologic Referral Criteria for Occupational Hearing Conservation Programs

Robert A. Dobie, MD

CAOHC Council Member Representing American Academy of Otolaryngology - Head & Neck Surgery

The OSHA Hearing Conservation Amendment of 1983 requires baseline and annual pure tone audiometry for workers with exposures exceeding 85 dBA (time-weighted average). While the main purpose of audiometry in the hearing conservation program (HCP) is the detection of noise-induced threshold shifts occurring in the workplace, these hearing tests will inevitably detect other problems as well.

The baseline audiogram may reflect pre-existing hearing loss from a variety of causes: aging, prior occupational noise exposure, non-occupational noise exposure, and other otologic disorders ranging from head injuries and ototoxic drugs to tumors and infections. Whether or not the baseline audiogram is normal, changes seen on annual testing may again be due to noise exposure (occupational or non-occupational), aging, or other otologic disorders, many of which require medical treatment. Clearly, audiometry in industry does not permit a diagnosis of noise induced hearing loss (NIHL) or any other etiology; it only indicates the presence and severity of hearing loss. Referral will sometimes be needed to identify the causes of hearing loss.

Audiometry within the HCP has technical pitfalls. With only pure-tone unmasked air conduction thresholds, conductive losses cannot be separated from sensorineural losses, and severe unilateral losses cannot be accurately measured. In addition, test-retest reliability is often poorer than in the clinical setting, because of differences in test environment, examiner skill, worker cooperation, and test time. Referral can solve these problems.

In the course of HCP audiometry, the occupational hearing conservationist (OHC) may also record symptoms the worker has experienced. While hearing loss and tinnitus are common complaints of workers with NIHL,

reports of recent ear pain, ear drainage or vertigo should be considered as red flags probably indicating the presence of some other otologic disorder and thus requiring referral. HCP questionnaires often ask about past history, too (e.g., head injury, infectious diseases, and exposure to ototoxic drugs). While these data can be very helpful in the process of differential diagnosis, they should not be used as referral criteria. Specifically, the fact that a worker has had such an event in his or her past should not automatically be considered adequate explanation for audiometric abnormalities, and does not eliminate the need for clinical evaluation.

Referral to an otolaryngologist (a physician who specializes in ear, nose, throat, and head and neck disorders) or otologist (an otolaryngologist who limits his practice to ear disorders) can offer several benefits to the HCP, including:

1. verification of audiometric thresholds,
2. detection of conductive hearing losses,
3. diagnosis of otologic disorders causing hearing loss,
4. treatment recommendations,
5. recommendations for on-the-job restrictions and precautions, and
6. reinforcement of the counseling provided in the HCP regarding prevention of NIHL.

OSHA requirements regarding otologic referral are rather vague. The Hearing Conservation Amendment states that "The employee shall be referred for a clinical audiological evaluation or an otological examination, as appropriate, if additional testing is necessary or if the employer suspects that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors," and further that "The employee is informed of the need for an otological examination if a medical

pathology of the ear that is unrelated to the use of hearing protectors is suspected." An additional statement regarding the professional program supervisor is relevant: "The audiologist, otolaryngologist or physician shall review problem audiograms and shall determine whether there is a need for further evaluation." In summary, OSHA requires the supervising audiologist or physician to refer when necessary, but doesn't specify criteria for referral.

Otologic referral is expensive both in direct costs and in lost work time. Therefore, HCPs need criteria that will identify workers most likely to benefit from referral. Any set of referral criteria should include symptoms, baseline audiometric abnormalities, and periodic test abnormalities. The audiometric findings most likely to lead to diagnosis of a serious or medically treatable otologic disorder are hearing loss asymmetries on baseline testing, low-frequency shifts on periodic testing, or large abnormalities of any type on either baseline or periodic testing (Dobie and Archer, 1981).

In 1983, the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS) published criteria for otologic referral for HCPs. The AAO-HNS criteria should yield 1-2% annual referral rates in well-run HCPs (Simpson, Stewart, and Blakley, 1995), and are recommended by CAOHC's *Hearing Conservation Manual* (3rd ed., 1993) as "an important part of a hearing health program." These criteria were republished by AAO-HNS (1997), without substantial revision, and are reproduced below for the use of course directors and HCP professional supervisors. Referral policy, including selection of referral criteria, is the responsibility of the professional supervisor, not the OHC.

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Otologic Referral Criteria, *continued from page 7*

AUDIOLOGICAL CRITERIA

Noise-exposed workers should undergo baseline and periodic audiometry by a physician, an audiologist, or a certified occupational hearing conservationist, on properly calibrated equipment that meets ANSI standards (ANSI S3.6-1989) in a proper test environment. If the test results indicate that the worker should be referred for failure to meet the audiometric standards set forth here, the professional supervisor may wish to refer the worker to an audiologist or an otolaryngologist for confirmation. If the audiologist confirms that the worker's hearing levels do not meet these criteria, the worker should then be referred to an otolaryngologist for evaluation or treatment.

There are two types of audiological criteria to be applied to baseline and periodic audiograms, respectively. A baseline audiogram (Section A) is the first audiogram performed; periodic audiograms, performed yearly, are to be compared to the baseline. The criteria for referral for threshold shifts seen on periodic audiograms (Section B) should be clearly distinguished from criteria for threshold shift used to trigger "in-house" action by the hearing conservation program, such as refitting of hearing protectors or counseling.

The Occupational Safety and Health Administration (OSHA) currently defines a "standard threshold shift" as a shift of 10 dB or more, in either ear, for the pure tone average of 2, 3, and 4 kHz; this is intended to detect small changes in hearing so preventive action can be taken. The criteria for referral, on the other hand, are intended to detect larger changes that are more likely to be significant, both medically and in terms of communicative difficulties.

Professional supervisors may choose to have repeat audiograms done to verify apparent threshold shifts prior to taking action; this should be done within 90 days of the periodic

audiogram in question. The criteria should then be applied to the repeat audiogram.

If a periodic audiogram (or retest as described above) demonstrates a "standard threshold shift" as defined by OSHA, this audiogram becomes the new baseline, to which subsequent periodic audiograms will be compared. However, for purposes of otologic referral, the original baseline should continue to be used. Otherwise, a slowly progressive hearing loss could become severe over a period of years: a series of small threshold shifts would occur, each triggering "in-house" action and resulting in a new baseline, but none large enough to result in otologic referral.

In addition to the quantitative criteria, workers showing variable or inconsistent responses or unusual hearing loss curves should be referred.

Section A: Baseline Audiogram

1. Average hearing level at 0.5, 1, 2, and 3 kHz greater than 25 dB, in either ear
2. Difference in average hearing level between the better and poorer ears of:
 - a. more than 15 dB at 0.5, 1, and 2 kHz, or
 - b. more than 30 dB at 3, 4, and 6 kHz.

Section B: Periodic Audiograms

1. Change for the worse in average hearing level, in either ear, compared baseline audiogram of:
 - a. more than 15 dB at 0.5, 1, and 2 kHz, or
 - b. more than 20 dB at 3, 4, and 6 kHz.

MEDICAL CRITERIA

If a worker has any of the medical problems listed, that worker should be referred directly to an otolaryngologist.

1. History of ear pain; drainage; dizziness; severe persistent tinnitus; sudden, fluctuating, or rapidly progressive hearing loss; or a feeling of fullness or discomfort in one or both ears within the preceding 12 months.
2. Cerumen accumulation sufficient to completely obstruct the view of the tympanic membrane or a foreign body in the ear canal.

A worker who has received otologic evaluation previously on the basis of failing the foregoing criteria, should be re-evaluated by the original otolaryngologist if there is subsequent development of ear pain, drainage, dizziness, dysequilibrium, imbalance, severe persistent tinnitus, or significant change in hearing levels as defined in Section B above. Patients with puzzling ear symptoms, such as diplacusis, fullness, and inconsistent audiometric findings should be referred to avoid overlooking a significant problem. Communication between the referring individual and the otolaryngologist is essential.

Pamphlet copies of these criteria may be obtained from the AAO-HNS at One Prince Street, Alexandria, VA 22314, (703) 836-4444.

REFERENCES

American Academy of Otolaryngology-Head and Neck Surgery. *Otologic Referral Criteria for Occupational Hearing Conservation Programs*. AAO-HNS Foundation, Inc., Alexandria, VA, 1997.

Council for Accreditation in Occupational Hearing Conservation. *Hearing Conservation Manual*, 3rd edition. CAOHC, Milwaukee, WI, 1993.

Dobie RA and Archer RJ. Otologic referral in industrial hearing conservation programs. *J Occup Med*, 23:755-761, 1981.

Simpson TH, Stewart M, and Blakley BW. Audiometric referral criteria for industrial hearing conservation programs. *Arch Otolaryngol Head Neck Surg*, 121:407-411, 1995.

Course Directors - Reminder!

CAOHC Course Approvals are not transferrable to another Course Director. If a change in a Course Director becomes necessary, the "new" Course Director must submit a "Request for Approval of Occupational Hearing Conservation Course" form to the CAOHC office for approval and printing of a new course certificate before the course is conducted.

If you have any questions regarding this requirement, please contact the CAOHC office at 414/276-5338.

OHC Corner

What Occupational Hearing Conservation Records Should I Maintain?

Barbara Panhorst, EdD RN COHN-S
CAOHC Representative of the American Association of
Occupational Health Nurses

The records you retain, the documentation of service and treatment rendered, and the paper trail you create can be as important as the audiogram itself. The popularity of using computers to accomplish portions of audiometric testing and record storage has led some occupational hearing conservationists (OHCs) to believe that there are no further recordkeeping requirements.

Computers are an excellent way to store information. However, as the saying goes...garbage in yields garbage out...so it is imperative that the data entered into the computer is accurate. Names, dates, social security number or employee identification number, and audiometric data must have every digit correct. One transposed or misread number can render the information invalid.

OSHA standard 1910.95 for occupational noise exposure addresses many issues of documentation and recordkeeping. OHCs are frequently responsible for maintaining these records. Some recordkeeping requirements are addressed below.

Noise Exposure Measurements

Noise exposure measurements must be made in various areas of the workplace to ascertain: which employees should be included in the hearing conservation program, as an aid to determine hearing protection requirements, and to use as a comparison when engineering controls change the noise level. Employees must be allowed to observe the monitoring and they must be notified of the results. **The OHC may be responsible for entering the time-weighted-average (TWA) of the employee into the computer or for providing this information to an outside vendor. OSHA requires that the noise exposure measurement be kept**

along with the audiogram. It is not necessary to write the noise level directly on the audiogram but this is certainly an easy way to keep the two together.

The standard states that noise exposure measurement records should be retained for **two years**. OSHA inspectors and consultants frequently want to review records for the last five years. From a liability standpoint, these records probably should be kept forever.

Audiometric Test Records

Audiometric test results should be retained for the **duration of employment plus 30 years**. Included in this area are baseline, annual, and termination test data. The record shall include:

- a. employee name and job classification
- b. date of audiogram
- c. examiner's name
- d. date of last acoustic or exhaustive calibration
- e. employee's most recent noise exposure assessment
- f. background sound pressure levels in the test booth/room

Also addressed are the comparison of the baseline to the annual audiogram, the identification of a standard threshold shift (STS), notification to the employee of an STS in writing within **21** days of determination, and a retest within **30** days of the STS determination. All of these items must have appropriate documentation. It is also wise to keep a record of the visual inspection of the ear.

Calibration

A functional (listening) check and a biological (using someone with stable hearing or a bio-acoustic simulator) check must be performed and documented **before each day's use** of the audiometer. An acoustical calibration must be performed **annually**. An exhaustive calibration must be completed **at least every two years**.

Noise levels in the test booth/room must be conducted periodically (no definition is given for periodically but many do this annually).

Hearing Protectors

The initial fitting of hearing protectors (size and type), along with subsequent substitutes, should be noted. When an STS occurs, the employee must be refitted and retrained in hearing protector use and care and the hearing protector must be attenuated to an 8-hour TWA of 85 dB or lower. This should be documented.

Training

All employees whose TWAs equal or exceed 85 dB must participate in annual training. The training may be documented by having employees sign a form or clipboard that states what the training consisted of, who delivered it, his/her qualifications, and the date. Annual training must include:

- a. the effects of noise on hearing
- b. purposes and procedures of audiometric testing
- c. purposes, advantages, disadvantages, and attenuation of hearing protectors and selection, fit, use, and care of these devices.

Certification

The OHC's training credentials (a copy of your CAOHC certification or other proof of training competence) should be placed with hearing conservation program data each year. These records should be archived in case of a future inquiry or claim. The certification and qualifications of the OHC can be very important in the validation of audiometric data.

Follow-up and Referral

Decisions made by your Professional Supervisor (see *UPDATE*,

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Management Support,

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world, corporate decision makers would intuitively understand the need and their moral obligation to protect the hearing of people they employ, but we know that too often hearing conservation does not get the support it deserves.

Barriers

What are the barriers to that management support and what can we as health and safety professionals do to overcome them? A lack of management support might be due to one or more of the following factors:

Lack of will

Hearing conservation is not seen as a life and death problem; the prevailing attitude is that hearing loss never killed anyone, etc.

Lack of resources

Hearing conservation is competing for dollars with programs such as confined space, lock out/tag out and emergency response that do have the potential to avert truly catastrophic incidents and prevent immediate injury and death.

Lack of knowledge

Managers often don't understand a) the effects of noise on hearing, b) that noise induced hearing loss (NIHL) is not due to natural aging, c) that this work-related hearing loss cannot be "corrected" with use of hearing aids, d) the effects that NIHL has on the individuals' capacity to communicate; safety and productivity; quality of work life; or quality of workers' life, e) that ear plugs and muffs do not offer fool-proof hearing protection, f) the financial drain of hearing loss claims, g) the relatively minor cost of hearing loss prevention

Lack of monetary incentives and penalties

In the past decade, OSHA's emphasis has been on hazards more likely to cause fatalities and serious illnesses such as lead poisoning, cancer,

and now silicosis. Moreover, worker compensation claims and costs vary from state to state, a further disincentive to commitment. Many workers with NIHL never submit worker compensation claims because they lack knowledge about NIHL.

Lack of time

Even those managers who evidence a commitment to a good hearing conservation program may have a lack of time to deal with it, when day to day crises and more urgent needs interfere.

Developing Solutions

The first step is analyzing at your specific work place which of these factors is a barrier, and evaluating how much each affects the lack of commitment you encounter. Clearly this is an area where you need to develop an understanding of the specific barriers in your facility.

Developing a strategy to get that missing corporate and facility management support is next. The organization I work for has, and tries to spread, a safety philosophy stating that *safety needs to go beyond compliance*. Safety is seen as a process that should be integrated into the entire business operating system, not just tagged onto a program that is the responsibility of a safety representative or professional. Such a safety system rewards its adherents with increased productivity, decreased injury and illness, improved worker morale, and ultimately, a positive effect on the financial results.

But how do you win that kind of argument in the real world when you may have little time to make these points and management hasn't already adopted a good safety management system?

Understand that management knowledge may be deficient. We can't assume that management understands the effect of NIHL on productivity or their worker compensation liabilities. Not all managers understand the work comp liabilities or the financial effect if all victims of NIHL were to submit claims. Questions that you yourself might be able to answer when addressing management include:

If yours is a state where OSHA isn't active in hearing conservation and the worker compensation remedies are small, what other negative effects could NIHL have on worker productivity?

Does management understand that working in a noisy environment can make people stressed and perhaps less compliant with other safety requirements?

Does management understand how workers' ability to communicate affects their ability to work without injury?

If there is significant exposure in the workplace to solvents or other chemicals such as organic lead, is management aware of new research on the combined effects of noise and these chemical exposures on hearing?

And, most important, what effect does NIHL have on the bottom line?

Demonstrate the effects of noise on hearing. An audiotape that mimics the effect of NIHL on speech communication and understanding can be a powerful example.

Understand the company culture. I have my own "tale of two companies" who couldn't be further apart in safety philosophy. *Company A* is a small employer where excessive noise is one of many uncontrolled hazards and management has been indifferent to the need for hearing conservation because they see it as hindering their ability to stay in business. *Company B* is a large conglomerate with a well-established safety program where the corporate safety director has autonomy to require facilities to comply with OSHA regulations, and the company has a strong commitment to a best practices approach. Even in *Company B* a facility

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Management Support,

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manager noted that he was "all for safety" but he didn't think he or his staff should spend significant time putting together programs to deal with what he clearly felt was a non-problem even though a few workers were frequently exposed at levels well over 90 dBA.

Focusing on NIHL's effects on specific financial results and productivity was the method that worked to garner management commitment in each case. In *Company A* compliance issues also drove a new-found commitment to having a good hearing conservation program. Other methods such as moral persuasion had little chance of success in *Company A*, although it might have been useful with *Company B*. *Company B* already has a high level of management commitment. Educating the facility manager on the financial and personnel issues was sufficient to motivate this manager to address hearing conservation more seriously.

Understanding the barriers and responding to them with specific information that informs managers and other decision makers about the financial and personal losses caused by noise induced hearing loss should help both external consultants and internal staff receive the management support the hearing conservation program needs to succeed.

OHC Corner

continued from page 7

Summer 1997) should be recorded. These include review of audiograms to verify if referral is appropriate, determination whether the annual audiogram will become the new baseline, and referral of the worker for evaluation if hearing protectors are causing a medical disorder.

Recording Shifts on the OSHA Log

When the physician, audiologist, or otolaryngologist reviewing the audiogram determines that a shift is work-related, employers are required to record it on the OSHA Log (see *UPDATE*, March 1997 for specific guidelines).

Conclusion

To use an old nursing adage...if you didn't document it, you didn't do it. Records are a critical component of any occupational hearing conservation program. Some records are required by law. The regulatory requirements of OSHA can only be fulfilled by explicit and complete records.

Records are essential for monitoring employee hearing; for creating a paper trail in worker's compensation or court cases; for assessing engineering controls; for motivation and training; and for the Professional Supervisor in audiogram review. As an OHC, you have a principal role in developing and maintaining records.

CAOHC COUNCIL TO MEET IN DENVER

The Council will meet in Denver, Colorado on October 9, 1997 at the Embassy Suites-Denver International Airport. The Council discusses the progress of CAOHC's goals, projects or committee activity, reports industry news from each of their respective organizations, and develops ways to continue to support hearing health in industry.

Following the Council Meeting on Friday, October 10, 1997, Council members will be instructing new and recertifying Course Directors in the CD Workshop.

New Council members will attend an afternoon orientation on the 8th and will be introduced to the current Council the following day. These new members will be announced in the Year-End edition of the *UPDATE*.

INSURANCE

The Maryland Court of Appeals, upholding a trial court, held that each separate claim by railroad workers for noise-induced hearing loss arose out of a separate "occurrence" and hence that 20,000 claims cannot be aggregated to trigger coverage under the employer's excess liability insurance policies. *CSX Transportation v. Continental Insurance*, No.49, 8/7/96. Under the limits of liability or "one occurrence" clause of the policies, the court said, all the injuries would have to have arisen from the same source or in the same location in order to constitute a single occurrence. The employer's alleged negligence in failing to provide protection against excessive noise cannot constitute the common cause of the injuries, the court ruled.

Reprinted with the permission American College Legal Medicine, *Legal Medicine Perspectives*, Winter 1997, Vol.3, No.4.

EMPLOYMENT OPPORTUNITY

Medical Assistants

Rapid growth of Dayton, Ohio, audiological private practice servicing industrial clients; future positions available to CAOHC certified audiometric technicians.

Fax resumes to the attention of: Mary at 937/436-0670.

OHC Certification

CAOHC Certification is valid 5 years from the date of the original 20 hour course. Recertification at an 8 hour course must be made by the expiration date of your CAOHC issued certificate. Your application must be filed with the CAOHC office to be valid. Contact CAOHC staff to verify certification or to locate an approved CAOHC course by calling 414/276-5338...or locate courses at CAOHC's website.

Change of Address Form (Make a copy of this form)

DID YOU FIND AN ERROR OR PLAN A CHANGE OF ADDRESS?

CAOHC would like to ensure that your mailing address stays current. If you have (or are going to make) a change in your name, degree, company, address, or phone number please take a minute to notify us by using this form.

CAOHC Certification No: _____

Name: _____ Degree: _____

Company Name: (Only if you are using this address) _____

Address: _____

Suite/Apt # _____

City: _____ State: _____ Zip: _____
+ 4 digit if known

Business Phone No: _____ Home Phone No: _____

Business Fax No: _____

Mail or Fax to:

CAOHC

Attn: Anne Macek, Administrative Assistant

611 E. Wells Street

Milwaukee, WI 53202

Ph. 414/276-5338

Fax. 414/276-3349

OHC FEEDBACK

Throughout the year, CAOHC receives surveys from OHCs who have applied for certification and recertification. Following are results from a sample of approximately 1650 surveys received year-to-date.

- How would you rate the Hearing Conservation Manual, 3rd Edition by Alice Suter

Excellent	54%	Fair	1%
Good	42%	Poor	0%
Average	4%		
- How do you rate the quality of the course overall?

Excellent	64%	Fair	0%
Good	32%	Poor	0%
Average	3%		
- Did the course meet your educational reasons/needs for attending?

Yes	100%	No	0%
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Thanks, OHCs, for the positive feedback. Congratulations, Course Directors!

Note: If you did not receive an official copy of CAOHC's Hearing Conservation Manual, 3rd Edition by Alice Suter, you may order one by contacting the CAOHC office at 414/276-5338. Ask for Anne.

Upcoming OHC Certification and Recertification Courses*

Approved September 1, 1997

*The listed dates indicate day one of the scheduled classes; certification courses are 20 hours in length; recertification classes are 8 hours.

Date	City	Course Director	Phone	Date	City	Course Director	Phone
9/15	Westmont,IL	Stukas, Natalie	(630) 241-0990	10/22	Boston,MA	Peterson, Nancy	617/267-4730
9/15	Lexington,KY	Green, Dr. William	606/323-5840	10/22	Charlotte,NC	Newman, Valerie	(910) 665-1818
9/16	Marietta,GA	Moore, A.Gregg	770/958-4699	10/22	Saratoga Springs,NY	Hengen, Garth	508/752-4663
9/16	Marietta,GA	Moore, A.Gregg	770/953-4699	10/23	San Jose,CA	Elmore, John	(800) 357-5759
9/16	Greensboro,NC	Juarez, Omar	(910) 665-1818	10/29	Phoenix,AZ	Elmore, John	(800) 357-5759
9/16	Lancaster,PA	Pitts, Donna	816/471-3900	10/29	Omaha,NE	Norris, Thomas	(402) 391-3982
9/16	Brooks AFB,TX	Waldo, Cpt. Tressie	(Air Force)	10/30	Kittanning,PA	Callen, Dr. Douglas	412/543-7068
9/17	LaMirada,CA	Metz, Dr. Michael	714/786-8884	11/3	Portland,OR	Attack, Rodney	(503) 228-6479
9/17	Boston,MA	Deppensmith, Kathryn	713/869-6664	11/3	Houston,TX	Deppensmith, Kathryn	713/869-6664
9/17	Piscataway, NJ	Kelly, Ellen	(908) 238-1664	11/3	Bremerton,WA	Young, Jeffrey	(NAVY)
9/17	Portland,OR	Dolan, Thomas PhD	503/725-3264	11/4	Decatur,GA	Russell, Charles	(404)294-4672
9/17	Lancaster,PA	Pitts, Donna	816/471-3900	11/4	Portsmouth,NH	Gordon, Pamela	508/750-8955
9/17	White River Junction,VT	Hengen, Dr. Garth	508/752-4663	11/4	Greenville,SC	Guryan, Stephen	(864) 235-9689
9/18	Portland,OR	Willoughby, Paul	503/228-9497	11/5	Jonesboro,AR	Prince, Dr. Jane	870/972-1166
9/18	Pittsburgh,PA	Angelelli, Dr. Roger	(412) 831-0430	11/5	Orlando,FL	Elmore, John	800/357-5759
9/18	Newport News,VA	Hecker, Henry	757/874-4665	11/5	Kenner,LA	Seidemann, Michael	(504) 443-5670
9/18	Richland,WA	Turner, Jay	509/735-7461	11/5	Concord,NH	Hengen, Garth	508/752-4663
9/22	Larose,LA	Insprucker, RC	504/632-3393	11/5	Albany,NY	Swisher, Timothy	(412) 367-8690
9/22	Towson,MD	Gladstone, Dr. Vic	410/646-2121	11/10	Sacramento,CA	Deppensmith, Kathryn	713/869-6664
9/23	Fort Bragg,NC	Gass, Maj Albert (Army)	910/396-2558	11/10	Westmont,IL	Stukas, Natalie	(630) 241-0990
9/23	Richland,WA	Turner, Jay	509/735-7461	11/12	LaMirada,CA	Metz, Dr. Michael	714/786-8884
9/24	Calgary,ALB	Moore, Thomas	403/264-1130	11/12	Detroit,MI	Elmore, John	800/357-5759
9/24	Lansing,MI	Kowalski, Richard	(Private)	11/12	Portland,OR	Fairchild, Michael	(503) 232-1646
9/24	Chapel Hill,NC	Stewart, Andy	(919) 967-2228	11/12	Dallas,TX	Harris, Dean	(970) 586-0702
9/24	Cincinnati,OH	Elmore, John	(800) 357-5759	11/17	Harrisburg,PA	Rhodes, Dr. Robert	713/869-6664
9/24	Dallas,TX	Harris, Dean	(970) 586-0702	11/18	Marietta,GA	Moore, A.Gregg	770/953-4699
9/24	Houston,TX	Deppensmith, Kathryn	713/869-6664	11/18	Marietta,GA	Moore, A.Gregg	770/953-4699
9/25	San Diego,CA	Sandlin, Robert	(619) 229-0722	11/18	Chapel Hill,NC	Stewart, Andy	(919) 967-2228
9/29	Walnut Creek,CA	Fankhauser, Dr. Charles	707/746-6334	11/19	Little Rock,AR	Rimmer, Thomas	501/663-4742
10/1	Florence,OR	Fairchild, Michael	(503) 232-1646	11/19	Atlanta,GA	Elmore, John	(800) 357-5759
10/1	San Antonio,TX	Elmore, John	(800) 357-5759	11/19	Chapel Hill,NC	Stewart, Andy	(919) 967-2228
10/3	Ft. Hood,TX	Babeu, Lorraine	(Army)	11/19	Cleveland,OH	Wolfe, William	(770) 518-0496
10/7	Merrillville,IN	Proctor, Jaclin	219/738-2528	11/19	Toledo,OH	Greenberg, Herbert	(419) 885-3848
10/7	Wellesley,MA	Gordon, Pamela	508/750-8955	11/20	Montgomery,AL	Smith, Dr. Curtis	(334) 887-6302
10/7	Kansas City,MO	Bloyer, Cindy	(R)	11/20	Pittsburgh,PA	Angelelli, Dr. Roger	(412) 831-0430
10/7	Brooks AFB,TX	Waldo, Cpt. Tressie	210/536-3649	12/1	Memphis,TN	Rhodes, Dr. Robert	713/869-6664
10/8	Little Rock,AR	Prince, Dr. Jane	870/972-1166	12/2	San Diego,CA	Jackson, CF	(Navy)
10/8	Atlanta,GA	Wolfe, William	(770) 518-0496	12/2	Indianapolis,IN	Cook, George (R)	910/665-1818
10/8	Lansing,MI	Kowalski, Richard	(Private)	12/2	Bala Cynwyd,PA	Heft, Laurel	610/667-1711
10/8	St. Paul,MN	Cary, Carolyn	612/736-2089	12/3	Little Rock,AR	Rimmer, Thomas	501/663-4742
10/8	Kansas City,MO	Bloyer, Cindy	(816) 471-3900	12/3	Atlanta,GA	Wolfe, William	(770) 518-0496
10/8	Valley Forge,PA	Swisher, Timothy	(412) 367-8690	12/3	Indianapolis,IN	Cook, George	910/665-1818
10/8	Santurce,PR	Hogan, Dr. Donald	787/728-3535	12/3	Bellevue,WA	McDaniel, Mary	206/706-7352
10/8	Brookfield,WI	Korabic, Edward	(414) 288-3428	12/5	Boston,MA	Peterson, Nancy	617/267-4730
10/10	Dallas,TX	Deppensmith, Kathryn	713/869-6664	12/8	New Orleans,LA	Deppensmith, Kathryn	713/869-6664
10/13	Indianapolis,IN	Lyon, Melissa	765/662-1702	12/8	Piscataway,NJ	Kelly, Ellen	(908) 238-1664
10/14	Camp Pendleton,CA	Ross, Alan	(Navy)	12/8	Beaufort,SC	Faulkner-Giochia, Carol	(Navy)
10/14	Detroit,MI	Simpson, Thomas Dr.	(313) 577-3339	12/9	Oakbrook Terrace,IL	Thunder, Thomas	847/359-1068
10/14	Cincinnati,OH	Swisher, Timothy	412/367-8690	12/9	St. Louis,MO	Bellamy, McKenna	314/968-4710
10/15	Little Rock,AR	Rimmer, Thomas	501/663-4742	12/9	Greensboro,NC	McCall, Kirsten	(910) 665-1818
10/15	Portland,OR	Deppensmith, Kathryn	713/869-6664	12/10	Oakbrook Terrace,IL	Thunder, Thomas	847/359-1068
10/16	St. Paul,MN	Cary, Carolyn	612/736-2089	12/10	Greensboro,NC	McCall, Kirsten	(910) 665-1818
10/20	Rota,	Sim, Lcdr Leslie	(Navy)	12/10	Maple Shade,NJ	Stepkin, Richard	(609) 435-7200
10/20	Tampa,FL	Rhodes, Dr. Robert	713/869-6664	12/10	Houston,TX	Elmore, John	(800) 357-5759
10/20	Newport,RI	Sells, Janet (Navy)	401/841-2281	12/11	Seattle,WA	McDaniel, Mary	713/869-6664
10/20	Fort Sam Houston,TX	Peterson, Cpt. Eric	210/916-7307	12/12	Piscataway,NJ	Kelly, Ellen	(908) 238-1664
10/21	Oakbrook Terrace,IL	Thunder, Thomas	847-359-1068	12/15	Normal,IL	Tannahill, J.Curtis	(309) 438-5803
10/21	Charlotte,NC	Newman, Valerie	(910) 665-1818	12/16	Kansas City,MO	Bloyer, Cindy	(816) 471-3900
10/21	Buffalo,NY	Chiarello, Joseph	610/667-1711	12/16	Kansas City,MO	Ratcliff, Linda	(R)
10/22	Denver,CO	Harris, Dean	(970) 586-0702	12/17	Ft. Hood,TX	Babeu, Lorraine	(Army)
10/22	Shelton,CT	Soehrin, Phyllis	(203) 735-4327	12/17	San Antonio,TX	Elmore, John	(800)357-5759
10/22	Oakbrook Terrace,IL	Thunder, Thomas	847/359-1068				

Please contact the CAOHC office at 414/276-5338 for additional course availability. Publication dates may have precluded some course dates.



Council for Accreditation in
Occupational Hearing Conservation
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