MOBILE MEDICAL TESTING

OSHA Issues Final Rule for Recording Occupational Hearing Loss

On July 1, 2002, OSHA published its final rule for recording occupational hearing loss on the Form 300 Log of Work-Related Injuries and Illnesses (29 CFR 1904.10); effective date January 1, 2003. Additional Clarifications were released on December 17, 2002. Highlights are as follows:

- **Basic recording criterion:** Employers must record work-related "Standard Threshold Shift" of STS (an average change of 10dB at 2000, 3000, and 4000 Hz in either ear, compared to baseline; age-adjustments allowed) provided that the employee's average hearing level at the same frequencies in the same ear is 25 dB HL or greater, (an average hearing level of 25 dB or more, regardless of employee's age. I.e., no age adjustment allowed).
- **Baseline/reference audiogram:** To determine whether a STS has occurred, the employer must compare the current hearing test results to the employee's baseline audiogram. The baseline audiogram is the employee's original audiogram or revised audiogram as defined under OSHA's noise standard 29 CFR 1910.95.
- **Retest/Confirmation of STS:** If the annual audiogram shows a STS, a hearing retest *may* be performed *within 30 days of the original test*. If the retest does not confirm the STS, then the case need not be recorded. However, if the retest confirms the STS, then the STS if work-related, must be recorded within 7 calendar days of retest. If a retest is not performed, then the case (again, if work related) must be recorded within 37 days of test.
- **Results of subsequent testing:** If later testing performed as part of the hearing conservation program indicates that the STS is not persistent, then the employer may erase or lineout the recorded entry.
- **Determination of work-relatedness:** Work-relatedness must be determined according to specifications of section 1904.5 of the general recordkeeping rule. If an event/exposure in the workplace caused or contributed to the shift in hearing or "significantly aggravated" a previously existing hearing loss, then the STS is recordable.
- **Forms:** OSHA has also updated its recordkeeping forms (now OSHA Form 300, 301, and 300A). Beginning January 1, 2004, employers will be required to record hearing loss cases in a separate column. In 2003, employers should record cases of occupational hearing loss as an "injury" (single event acoustic trauma) or "other illness" (long-term exposure), as appropriate.
- **State Plans:** Although state-run OHA plans were allowed to continue utilizing more stringent enforcement criteria during 2002, all are required to adopt the final federal rule for hearing loss recordability, effective January1, 2003.
- **Applicable industries:** Certain industries are not covered under the general hearing conservation amendment 1910.95. (construction, agriculture, oil and gas drilling, etc.) but are included under 1904. If such employers choose to conduct audiometric testing programs, then the hearing loss recordability provisions of 1904.10 will apply.

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OMY, Inc. 310 Harrisburg St., East Berlin, PA 17316 800-760-3000

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OSHA's Final Rule for Recording Occupational Hearing Loss

By Susan C. Megerson, MA CCC-A
The University of Kansas Intercampus Program in Communicative Disorders

For those professionals working in occupational health and safety settings, one of the most complicated responsibilities has traditionally been the reporting of work-related injuries and illnesses as required by the Occupational Safety and Health Administration (OSHA). Occupational Hearing Conservationists (OHCs) have been particularly frustrated by the long-standing ambiguity surrounding recording work-related cases of hearing loss. For a historical perspective of related OSHA rulemaking activities on both federal and state levels, see Megerson (1995, 1997, 2001 and 2002) and CAOHC (2000).

With its recent release of a Final Rule for recording hearing loss on the new Form 300, OSHA has at last attempted to clarify the controversy. In a press release dated June 28, 2002, the Agency announced that beginning January 1, 2003, employers will be required to record work-related cases of Standard Threshold Shift (STS), but only when the employee also "shows a marked decrease in overall hearing" (OSHA, 2002a) (to review the press release, access the CAOHC website at www.caohc.org). At the same time, OSHA announced that it is seeking further comment on whether to include a separate hearing loss column on the Form 300 Log of Occupational Injuries and Illnesses.

Summary of the Final Rule

Nearly twenty years following implementation of the Hearing Conservation Amendment, 29 CFR1910.95, OSHA's new recordkeeping rule for hearing loss was finally issued July 1, 2002 with an effective date of January 1, 2003 (OSHA 2002b). Hearing loss requirements are now part of a separate section of the rule, entitled 1904.10: "Recording criteria for cases involving occupational hearing loss." The keypoints are summarized in **Table 1**. Highlights are as follows:

(1) Basic recording criterion: Employers must record work-related STS *(an average change of 10 dB at 2000, 3000, and 4000 Hz in either ear, compared to baseline; age-adjustments allowed)* ***provided that*** the employee's average hearing level at the same frequencies in the same ear is 25 dB HL or greater *(an average hearing level of 25 dB or more in comparison to audiometric zero; no age adjustments allowed [1]).* OSHA explained that it chose the new "two-part criterion" in the final rule because (1) STS is a sensitive measure of noise exposure at the employee's current place of employment and (2) overall hearing levels in excess of 25 dB "assures that all recorded hearing losses are significant illnesses."

Here's an example: An employee's annual audiogram shows an age-adjusted shift of 10 dB compared to the original baseline audiogram at 2000, 3000 and 4000 Hz (STS). Next, for the same ear, let's say the current test results (thresholds) are 15 dB, 20 dB and 25 dB HL (hearing level) as measured on the audiometer (actual levels, no comparison to baseline, no age adjustments included). The average hearing level is therefore 20 dB HL, less than OSHA's cutoff for normal hearing status (25 dB HL). Although the employee has

demonstrated STS on this year's audiogram, because overall hearing levels are "within normal range", the event is not considered serious enough to be recordable.

Table 1: Example Protocol for Determining STS Recordability

If at any step a "no" is encountered, the process ends and the hearing change is not recorded on Form 300 as a recordable event.

- **Step 1:** Compared to the original baseline audiogram or last audiogram showing a recordable shift in hearing, is there an STS in either ear (age adjustments allowed)? If yes, continue to step 2.
- **Step 2:** Is the average hearing level on the current hearing test at 2000, 3000, and 4000 Hz in the same ear greater than or equal to 25 dB HL (no age adjustments allowed[1])? If yes, continue to step 3.
- **Step 3:** Is the STS confirmed upon 30-day retest (or was a retest not conducted)? If yes, continue to step 4.
- **Step 4:** Has a qualified health care professional determined that the shift in hearing is more likely than not work-related? If yes, continue to step 5.
- **Step 5:** Record the case on Form 300 within 7 days of retest (or within 37 days of test if retest not conducted).

(2) Baseline/reference audiogram: To determine whether a STS has occurred, the employer must compare the current hearing test results to the employee's baseline audiogram. If the employee has never experienced a recordable shift in hearing, then the original baseline is used as a reference. However, if the employee has previously experienced a recordable hearing loss, then the employer must compare the current test results to the audiogram which was previously designated a recordable case (i.e. the employee's "revised baseline" for recordability purposes).

(3) Reconfirmation of STS: If the annual audiogram shows an STS, a hearing retest may be performed within 30 days. If the retest does not confirm the STS, then the case need not be recorded. However, if the retest confirms the STS, then the STS (if work-related) must be recorded within 7 calendar days of the retest. In the event that a retest is not performed, then the case (again, if work related) must be recorded within 7 calendar days of the end of the 30-day retest period.

(4) Results of subsequent testing: If later testing performed as part of the hearing conservation program indicates that the STS is not persistent, then the employer may erase or line-out the recorded entry. OSHA explained that it added this language to the Final Rule "to minimize the recording of temporary hearing loss cases while capturing complete data on the incidence of hearing loss disorders."

(5) Determination of work-relatedness: In the Final Rule, OSHA stresses the importance of case-by-case review, and states that hearing loss work-relatedness must be determined according to specifications of section 1904.5. That is, if an event/exposure in the workplace caused or contributed to the shift in hearing or "significantly aggravated" a previously existing hearing loss, then the STS is recordable. In addition, OSHA specifically states that a case need not be recorded if a physician or other licensed health care professional determines that the hearing loss is not work-related or not significantly aggravated by occupational noise exposure. It is also worth noting the significance of last year's lawsuit brought against OSHA by the National Association of Manufacturers (NAM) following promulgation of the general recordkeeping rule. One of the main issues raised by NAM was the definition of a work-related injury. As part of a settlement agreement between OSHA and NAM filed in U.S. District Court in November 2001, OSHA clarified that when it is not obvious whether the event or exposure occurred in the work environment or elsewhere, the employer must make a determination of "whether it is more likely than not that work events or exposures were a cause of the injury or illness, or of a significant aggravation to a pre-existing condition. If the employer decides the case is not work-related, and OSHA subsequently issues a citation for failure to record, the Government would have the burden of proving that the injury or illness was work-related" (OSHA, 2001).

(6) Forms: Although OSHA has also updated its recordkeeping forms (now OSHA Form 300, 300A, and 301), designation of a separate column for recording hearing loss is still under review. When OSHA issued its final hearing loss recording criteria on July 1, 2002, the agency also announced a delay in finalizing a separate column (OSHA 2002c). A response in strong support of a separate column was filed August 23, 2002 by the Coalition to Protect Workers' Hearing, a consortium of professional organizations of which CAOHC is a member (to review the comment document, access the CAOHC website at www.caohc.org).

(7) Additional considerations:

- **State plans:** Although state-run OSHA plans are allowed to continue utilizing more stringent enforcement criteria during 2002, all are required to adopt the final federal rule for hearing loss recordability, effective January 1, 2003.
- **Applicable industries:** Certain industries are not covered under the hearing conservation amendment 29 CFR 1910.95 (construction, agriculture, oil and gas drilling, etc.), but are included under 1904. If such employers choose to conduct audiometric testing programs, then the hearing loss recordability provisions of 1904.10 will apply.
- **STS follow-up:** And of course, the new recordkeeping provisions in no way change an employer's obligations under 1910.95. All employees showing STS must receive appropriate follow-up as defined by the hearing conservation amendment, whether the shift in hearing is recordable or not.

Implications for the OHC and the Hearing Conservation Program

Although there may be a general sense of relief among OHCs that the issue of hearing loss recordability is now "settled," there are still many details of application yet to be worked out. Importantly, individual case review remains an essential aspect of managing occupational hearing loss recordability. Each "potentially recordable shift" that meets the specified OSHA

criterion, and any other suspected work-related hearing loss, should receive careful review by an audiologist or physician knowledgeable in the effects of noise and in hearing conservation programs. "Professional supervisors" reviewing audiometric data should clearly understand the issues associated with hearing loss recordability, as well as hearing conservation program regulations and matters of workers' compensation (all distinct and separate rules with different purposes and requirements). See **Table 1** for an example protocol for processing potentially recordable cases under the new Final Rule. However, keep in mind that OHCs will need to check with their audiometric program professional supervisor for specific guidance on how potentially recordable cases will be reviewed for each employer. Following are a few of the details to be considered:

- **Designation and maintenance of "recordability baseline:"** Although OSHA has clarified that the employer must compare current audiograms to the original baseline or a previously recorded case, this may not prove to be a simple task. Depending on which criterion an employer has utilized in the past, it may not be obvious which cases of hearing shifts have previously been recorded: any STS? only 25 dB shifts in hearing? only shifts determined to be work-related? If recordability is tracked via software, how complete and accurate is the documentation of whether or not a case has been previously recorded? Even moving forward, although STS becomes the trigger point for 2003 and beyond, it is clear that not all cases of STS will be deemed to be work-related, and therefore recordable. It will now be necessary to determine a separate "recordability" baseline which can be reset (individually for each ear) when a case is actually recorded on the OSHA Log. This tracking ability will become especially important should an employer wish to utilize the "line-out" option to erase previous STSs recorded over the past five years. Clearly, the OHC and professional reviewer will need to establish a solid line of communication to accurately maintain employee baselines for the purpose of identifying potentially recordable shifts.

- **Importance of 30-day retests:** In the past, employers may not have chosen to aggressively pursue retests for employees who showed STS. After all, in a hearing conservation program, the OHC's emphasis is on prevention and rightly so; individual counseling and hearing protection refitting/retraining are key. Now, however, any case of STS not retested would become automatically recordable if the employee's history indicates that the shift is "more likely than not" considered to be work-related.

- **Documentation of individual background information:** In order for the reviewing professional to make a definitive call on work-relatedness, accurate and up-to-date noise exposure assessments must be available. In addition, the OHC will need to provide the reviewer with medical case history information and documentation of any known off-the-job noise exposures. It is now more important than ever for the OHC to ensure that a complete ear/hearing and noise history are on file for each employee in the hearing conservation program.

Finally, regardless of the criterion used for recording work-related shifts on the Form 300, the OHC should remember that this action is merely a recordkeeping function. Recording a case on the OSHA Log does nothing to protect that employee from further hearing loss. OHCs must therefore remain diligent in their commitment to preventive measures that will truly have an impact on decreasing hearing loss and improving quality of life. This preventive focus ultimately benefits both the noise-exposed worker and the employer.

1 There has often been confusion (and professional disagreement) over the use of age

adjustments in audiometric data analysis. Generally, the use of age adjustments is considered appropriate when calculating shifts, or changes, in hearing compared to a baseline/previous hearing test. The intended purpose of the age adjustment is to attempt to factor out changes in hearing that might be related to the aging process over time rather than the noise exposure. In contrast, age adjustments are generally considered to be inappropriate when calculating existing hearing level, or hearing loss. That is, the purpose of this analysis is to predict whether the individual will exhibit some type of functional impairment (i.e. hearing difficulty) compared to a reference standard or norm (i.e. 25 dB HL). This calculation is therefore usually considered unrelated to age. As an example, an individual with a mild hearing loss is expected to experience occasional hearing difficulties in everyday listening situations, whether that individual is 6 years, or 60 years, of age.

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Susan Megerson is an Instructor for the University of Kansas Intercampus Program in Communicative Disorders. She has been a CAOHC-certified Course Director since 1984, and has served on the Council, including a term as Chair.