



NHCA Guidelines for Recording Hearing Loss On the OSHA 300 Log

**3-28-11
“Form 300”**

Background

The Need for Guidance

For several years audiologists and other professionals who review audiograms have reported resistance from their clients regarding the determination of work relatedness for purposes of recording hearing loss on the OSHA 300 Log. There is ample evidence that occupational illnesses and injuries are routinely under-reported and it appears that hearing loss is no different.

Professional reviewers commonly report pressure by their clients to make a determination that an STS is not recordable. Some have been questioned and challenged on every case they have identified as work related. Others are unsure of their obligations under the OSHA regulations. To the detriment of noise-exposed workers, the recordability issue may be having a negative effect on STS follow-up. OSHA recordable statistics are merely a tool by which OSHA and NIOSH may assess the prevalence of safety and health problems in certain industries and jobs. The recordable determination process is

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unrelated to hearing loss prevention strategies. To the extent that STSs are minimized because of reluctance to record them, workers are not getting the necessary counseling, hearing protector checking, and noise control remedies that could prevent further hearing loss.

Contributing additional incentives for companies to under-report, certain hearing conservation service providers are advertising “low” or “minimal” STS rates based on non-standard or spurious testing or data analysis practices, thus undercutting the work of conscientious service providers and, in the end, being a disservice to employers as well as workers.

OSHA’s Approach

OSHA’s policies, as well as a legal determination, hold that any injury or illness must be reported on the 300 Log if it is “more likely than not” work related. This relationship is positive if (and only if) the work or work environment is a contributing cause. Hence, the majority of the hearing loss need not be caused by work, but if there is a 51% probability that *any part* of a qualifying hearing loss is work related, it is to be recorded. If the STS qualifies according to the regulation 1904.10, and there is no follow-up retest showing otherwise, the STS must be recorded. OSHA compliance officers will look to see whether an employer has complied with *every section* of the hearing conservation standard. Thus, professional reviewers need to have solid justifications for any of their determinations, especially if they determine that a hearing loss is not recordable.

Current Situation

Those who provide hearing conservation services to industry must maintain professional objectivity. Although our services are contracted by employers, we do not represent employers, employees, or OSHA, but rather rely solely on our professional judgment. While some professional reviewers may attempt to blame everything except occupational

noise, this approach is disingenuous and contrary to the NHCA code of ethics. In keeping with the concept of “more probable than not,” uncertainties should lead to further evaluation of the hearing loss but not “denial” of work relatedness unless one is reasonably sure that the *entire* loss is not work related. Certainly more information is often desirable, but to hold off on making a determination until the company provides all of the desired data (noise exposure, history, HPD information, etc.) is to take the risk that these data may never appear. There comes a point when a decision must be made.

Questions may arise about how thorough an investigation should be. Some have proposed that professional reviewers must be able to stand in front of a jury of their peers to make the case that a loss is or is not work related. This is a reasonable approach, but one should keep in mind that the jury of peers may not all be in agreement. Others have pointed out that not all questions of work relatedness have answers and there is often room for interpretation. For example, how can we know that noise measurements are accurate reflections of an employee’s typical exposure? Or if an employee says he or she wears HPDs, how can we know that the devices are worn consistently and effectively?

Professional reviewers must be able to substantiate their determinations. The determination of work relatedness depends on myriad variables, many of which are beyond the control of the reviewer. Because of the legal requirements, in order to deny work relatedness the reviewer needs to make and support the determination that *no* part of the hearing loss is work related. Thus the reasonable approach is to go ahead with a determination of work relatedness and therefore recordability, unless there are clear and cogent reasons why the loss is entirely unrelated to the work environment.

These decisions should always be made with informed judgment and the awareness of one’s professional and ethical responsibilities.

Guidelines for Determining Work Relatedness

The following guidelines reflect an approach to the problem, not so much in the form of a checklist, but as general principles of guidance. They assume that cases of hearing impairment will only be subject to recording on the OSHA 300 Log if they are STSs that qualify according to the regulation 1904.10.

Noise Measurements

Whenever they are available, noise measurements should be taken into consideration, especially if they reflect exposure levels of 85 dBA and above, or conversely if they reflect exposures of less than 80 dBA, with the former being clearly within the hearing loss risk category, and the latter being clearly in the no-risk category. For TWAs between 80 and 85 dBA, reviewers need to rely even more heavily on other types of information. If dosimetry is used, the dosimeter's lower threshold should be at least 80 dBA or below, as required by OSHA's hearing conservation amendment. If the measurements are taken with a sound level meter there should be sufficient samples to provide evidence that the measurements reflect the employee's actual exposures. If the noise measurements are only specific to a certain job category rather than to the employee in question, it would be important to obtain more evidence.

Audiometric Configuration

The following configurations may be generally assumed to be non-noise related, **although it must be kept in mind that it is possible for these configurations to occur along with occupational noise-induced hearing loss:**

- Flat
- Upward sloping
- Severe to profound loss, especially in workers younger than about age 50
 - Note: Although more severe losses suggest factors other than noise exposure, workplace noise may still have been a contributor. Care should be taken to assess these cases for signs that workplace noise may have

aggravated the loss before making a determination that the loss is unrelated to workplace exposures.

- Evidence of a conductive loss (through bone conduction testing, otoscopic evaluation, or history)
- Extremely variable thresholds
- Unilateral loss (as opposed to unilateral STS, which happens frequently)
- Large difference between ears

Although the presence of a noise notch with slight improvement at 8000Hz is usually indicative of noise damage, the absence of the notch, especially in older individuals, is not diagnostic. Even if the 8000-Hz notch is non-existent, the hearing loss may very well be noise-induced, especially in older workers.

Use of Hearing Protection Devices

Records or statements indicating the fact that an employee uses HPDs is not sufficient evidence of non-work relatedness for many reasons. Just a few of them are as follows:

- Insufficient evidence that employee has always used HPDs on the job,
- that they are worn consistently,
- that they are fitted properly,
- that they are routinely exchanged when worn out,
- that their attenuation is sufficient for the employee's noise exposures,
- that they are not removed periodically for communication or other purposes.

Hearing conservation professionals have pointed out that few employers adequately fit HPDs, supervise their use, or train employees in their use and care, even though these are OSHA requirements. Very few employers perform on-the-job fit testing. Even when this kind of verification is obtained, it is not necessarily diagnostic because there is no indication that fit testing at one time reflects the habitual use of HPDs.

Compliance with the Hearing Conservation Amendment

Stated compliance with OSHA's hearing conservation amendment does not assure that a shift in hearing level is not work related. Most professionals in hearing conservation know that workers can still incur occupational hearing losses in spite of the employer's attempt to comply with regulations. Compliance with OSHA's standards should be considered the minimum and does not reflect best practice for the prevention of hearing loss.

Employers are sometimes confused about the difference between STS as a point of intervention and a recordable shift in hearing as the marker for recording an occupational hearing loss on the OSHA 300 Log. Therefore, reviewing professionals should be able to differentiate the necessary follow-up actions for their clients. Emphasis on the importance of completing follow-up actions for each STS is encouraged.

History of Non-Occupational Exposure and Medical History

A thorough history of non-occupational noise exposure may be helpful in counseling employees, but not always in determining work relatedness. For example, recreational noise sources in an employee's history may appear to be significant contributors to the hearing loss. However, the presence of additional sources of noise exposure does not negate the evidence of workplace exposure and the possibility of work relatedness. The professional reviewer must keep in mind the legal test that if it is "more likely than not" that the employee's work has "caused or contributed to" *any* of the loss, or "significantly aggravated" a pre-existing loss, it must be recorded.

There are at least two circumstances where the reviewer can be confident that the hearing loss of a noise exposed worker is not work related: First, if the medical history reflects auditory conditions that are clearly hereditary or disease related, or other otological abnormalities, especially after medical follow-up, the reviewer can assume non-work

relatedness. Second, if the employee has been exposed non-occupationally to a blast of some kind, either in the military or recreationally, and the audiometric data and personal history support this fact, the change in hearing thresholds are not likely to be work-related.

The reviewer should be aware that occupational noise can exacerbate a pre-existing condition. For example, if an employee was exposed to fireworks as a child, followed by several years of high levels of noise at work, one cannot assume that the fireworks exposure was the sole cause of a subsequent hearing shift.

Losses attributed to presbycusis cannot generally be considered non-work related. First, adjustments for presbycusis most likely have already been made to the thresholds for purposes of identifying the STS. Also, it is virtually impossible to separate the noise-related from the presbycusic components. Under special circumstances an older employee (e.g. age 68-75) may experience the first STS over the age of 60, at which point OSHA's presbycusis tables stop, as do the tables in the ANSI S3.44 standard. Here professional judgment is particularly important. In addition to the employee's record of noise exposure, the professional could rely on published data for aging populations, such as those of the "Baltimore Study"¹ and the National Health and Nutrition Examination Survey (NHANES)².

Retest and Referral

It is always good practice to perform a follow-up retest in the event of a recordable degree of hearing shift if one has not already been done. The regulation allows the

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Pearson JD, Morrell CH, Gordon-Salant S, Brant E, Metter J, Klein LL, Fozard JL. 1995. Gender differences in a longitudinal study of age-associated hearing loss. *J Acoust Soc Am* 97(2):1196-205.

² See Hoffman HJ, Dobie RA, Ko C-W, Themann CL, Murphy WJ. 2010. Americans hear as well or better today compared to 40 years ago: Hearing threshold levels in the unscreened adult population of the United States, 1959-62 and 1999-2004. *Ear Hear.* 31(1):151-4.

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employer 30 days to conduct a retest, and if the STS is confirmed or no retest has occurred, the employer has another 7 calendar days to record the shift on the OSHA 300 Log, regardless of whether a determination of work-relatedness has been made. When the professional reviewer sees the possibility of an otological issue or some other kind of audiometric abnormality, the reviewer should recommend a clinical or otological evaluation before determining that the loss is non-work related. If after treatment a sensori-neural loss persists and its extent still qualifies as a recordable STS, it is likely to be work related and would need to be recorded. If after treatment the shift no longer qualifies as recordable, the entry on the 300 Log may be lined out.

The question may arise as to who should pay for the treatment. Since it is not required by OSHA, the employer could put the burden on the employee to pay, but if there is no action, then the loss would have to be recorded as work related. It might be in the employer's interest to go ahead and pay for the medical visit.

Wording of the Determination

While it is not the role of these guidelines to dictate the wording of reports, professional reviewers have made several suggestions as to the wording of the determination. The following options are offered:

“This hearing loss appears to be work related because of x, y, and z. So that I may make a more definitive determination, please forward information on noise exposure from the employee's file.”

“As a professional in the field of hearing conservation and noise-induced hearing loss, it is my opinion that this hearing impairment has been caused or aggravated by workplace noise and meets the requirement for recording on the OSHA 300 Log.” (or has not been caused or aggravated by workplace noise and therefore does not need to be recorded on the OSHA 300 Log at this time.)