DOCUMENT RESUME

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[Hearing Loss Compensation Criteria Used by the Department of Labor under the Federal Employees' Compensation Act]. December 27, 1976. 7 pp.

Report to Fred G. Clark, Assistant Secretary for Administration and Management, Department of Labor; by Frank M. Kikus, Assistant Director, Human Resources Div.

Issue Area: Consumer and Worker Protection (900).
Contact: Human Resources Div.
Budget Function: Education, Manpower, and Social Services: Other Labor Services (505).
Organization Concerned: Office of Workers' Compensation Programs; National Academy of Sciences: Committee on Hearing, Bioacoustics and Biomechanics; National Inst. for Occupational Safety and Health; American Academy of Ophthalmology and Otolaryngology.
Authority: Federal Employees' Compensation Act.

As part of a review of the administration of the Federal Employees' Compensation Act, an evaluation was conducted of criteria used by the Office of Workers' Compensation Programs (OECP) for awarding compensation for hearing loss. The review focused on one element of the criteria that is at variance with studies conducted by the American Academy of Ophthalmology and Otolaryngology, the National Institute of Occupational Safety and Health, and the National Academy of Sciences' Committee on Hearing, Bioacoustics and Biomechanics. This element is the formula used for computing hearing loss based on levels of loudness at which a person can hear various frequencies, deducting a value from the frequencies for normal ranges of loss. Findings/Conclusions: The OWCP method differed from the other accepted methods by making deductions from each of the frequencies rather than from an average value. The differences in these methods could represent about $1,900 more per case, or a total of $9 million, by using the OWCP method. Recommendations: Consideration should be given to the averaging method before completion of future studies on hearing loss compensation. (HTW)

00598

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

HUMAN RESOURCES
DIVISION

IN REPLY
REFER TO:

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December 27, 1976

Mr. Fred G. Clark
Assistant Secretary for
Administration and Management
Department of Labor

Dear Mr. Clark:

We are making a review of the administration of the Federal Employees' Compensation Act (FECA) by the Department's Office of Workers' Compensation Programs (OWCP). As part of this review, we have been evaluating the criteria and standards used by OWCP for awarding compensation for hearing loss.

We recognize that there is an OWCP Task Force that is reviewing the administration of the FECA and that OWCP is considering the possibility of funding a study of hearing loss compensation criteria. Since any revisions to the present criteria that may result from such studies may not take effect for many months, we would like to bring to your attention one feature of the criteria which does not seem to be supported by the findings of prior studies. These studies were made by the American Academy of Ophthalmology and Otolaryngology (AAOO), the Department of Health, Education and Welfare's National Institute of Occupational Safety and Health (NIOSH), and the National Academy of Sciences' Committee on Hearing, Bioacoustics and Biomechanics (CHABA).

This matter concerns the OWCP method of deducting a "fence" from each of the measured frequencies instead of the AAOO, NIOSH and CHABA accepted method of deducting a fence from the average of the measured frequencies. If our review of a sample of 100 compensated hearing loss cases filed between calendar year 1970 and 1976 is representative of the 11,000 hearing loss cases in the backlog, the differences in these two methods could potentially represent an average of about $1,900 more per applicable case by using the OWCP method, or a potential $9 million.

BACKGROUND

Hearing loss compensation is a "scheduled award" provided by the FECA to Federal civilian employees who incur a hearing impairment, or aggravate a pre-existing one, while performing their duties. As a scheduled award this compensation is awarded whether or not the impairment results in a loss of wages (most do not). Compensation is based on the percentage of hearing loss the employee has accumulated. The FECA provides 52 weeks of compensation for complete loss of hearing of one ear; and 200 weeks for complete loss of hearing of both ears. Compensation is computed at three-fourths of the employee's average weekly wage for employees with dependents, and two-thirds for employees without dependents. This cannot exceed three-fourths of the maximum pay of a GS-15.

The annual number of hearing loss compensation claims have grown rapidly from an estimated 200 in 1966 to 8,000 in 1975, totaling 28,000 for that period. Of the claims that have been adjudicated, we estimate that over 70 percent were awarded compensation, and that they received an average award between $6,000 to $9,000. As of November 1976, Labor officials estimate a backlog of hearing loss claims of about 11,000. OWCP has a special Hearing Loss Task Force to expedite adjudication of the backlog.

OWCP FORMULA FOR COMPENSATING HEARING LOSS

The FECA does not specify the criteria and standards to be used in determining the employee's hearing loss. OWCP, therefore, has established a formula for computing the compensable percentage of hearing loss.

Until 1969, OWCP used a formula developed by the AAOO and adopted by the American Medical Association (AMA). This formula is still in use today by most State Workers' Compensation programs.

The formula consisted of taking the levels of loudness (decibels, or dB) at which a person can hear pure tone in each of the frequencies of 500, 1000, and 2000 Hertz (cycles per second) in each ear, deducting a 25 dB fence from the average of these decibel levels (to exclude a range of loss considered normal for the ability to hear everyday speech) and multiplying the result by a factor of 1-1/2 percent to convert the decibel loss to percentage hearing impairment.

The binaural hearing loss is then computed using the following formula adopted from AMA guidelines:

$$\frac{5 \times \text{\% of impairment in better ear} + \text{\% of impairment in worse ear}}{6}$$

In 1969, to recognize impairment caused by higher frequency decibel losses, OWCP changed the test frequency levels used to 1000, 2000, and 4000 Hertz. It retained all other aspects of the AMA/AAOO formula including the deduction of the 25dB fence from the average of the decibel readings from the tested frequencies.

In 1973, OWCP modified the formula to its present form, based on a 1972 NIOSH report "Occupational Exposure to Noise."1/ This report said:

> "Simply stated, hearing impairment for speech communication begins when the average hearing level at 1000, 2000, and 3000 Hz exceeds 25dB re ANSI (1969)." (Underscoring added)

Based on this report OWCP changed the frequency levels to 1000, 2000, and 3000 Hertz, and kept the 25dB fence. They also continued to use the AMA/AAOO 1-1/2 percent conversion factor and the same binaural weighting.

However, OWCP discontinued deducting the 25dB fence from the average decibel readings of the frequencies, and changed to computing an average after deducting the fence from each frequency. No rationale was given by OWCP for making this specific change.

EFFECT OF CHANGE IN FENCE DEDUCTION METHOD

In a January 1973 memorandum to the OWCP Director, outlining the recommended standards for the new formula, the OWCP Medical Director recommended the use of the NIOSH suggested criteria. In an example to illustrate the criteria, however, he deducted the fence from the hearing level at each of the frequencies instead of the average hearing level of these frequencies, as was intended in the NIOSH criteria. (In June 1976, the OWCP Medical Director acknowledged to us that this OWCP deduction method was incorrect and that he would recommend that OWCP make this change.) Since the example he used had no hearing levels less than 25 decibels, the difference in amount of compensation that would be awarded in the two methods of deducting the fence was not apparent. However, whenever the hearing levels are not all at 25 decibels or above, the difference in computed impairment can be substantial.

For example, an employee aged 59 with dependents, earning $300.80 weekly, under the OWCP formula was found to have a 10 percent hearing impairment for an award of $4,512.00. If OWCP had used the average method he would have received $1,466.40.

1/ Although this report only addressed noise conservation and not hearing loss compensation, it did , in relevance to both topics, address the beginning point of hearing impairment.

This difference is explained below.

(A) AWARD USING OWCP FORMULA OF DEDUCTING FENCE FROM EACH FREQUENCY

	Decibel readings					
Frequencies	Right ear	-	25 fence	Left ear	-	25 fence
1,000	25	-	25 = 0	10	-	25 = 0
2,000	25	-	25 = 0	10	-	25 = 0
3,000	50	-	25 = 25	45	-	25 = 20
			25			20
			÷ 3			÷ 3
Average decibel loss			8-1/3			6-2/3
Conversion factor			x 1.5%			x 1.5%
Percent loss each ear			12-1/2%			10%

Weighted combined l[illegible] 0% + 12-1/2%) ÷ 6 = 10% (rounded)
Compensation = 10% x [illegible] week standard for binaural loss x $300.80 weekly wage x .75 factor for claimants with dependents = $4,512.00

(B) AWARD IF THE FENCE HAD BEEN DEDUCTED FROM THE AVERAGE

	Decibel readings	
Frequencies	Right ear	Left ear
1,000	25	10
2,000	25	10
3,000	50	45
	100	65
	÷ 3	÷ 3
Average gross decibel loss	33-1/3	21-2/3
Less 25dB fence	- 25	- 25
Average net decibel loss	8-1/3	0
Conversion factor	x 1.5%	x 1.5%
Percent loss each ear	12-1/2%	0%

Compensation = 12-1/2% x 52 weeks standard for monaural loss x $300.80 weekly wage x .75 factor for claimants with dependents = $1,466.40

As this case illustrates, there will be a difference in award between the two methods whenever there is less than a 25 decibel loss in at least one of the frequencies for at least one of the ears (see different percentage calculations for the left ear). For those with a loss of 25 decibels or above in all frequencies, the award would be the same with either approach (see calculations for the right ear).

To approximate the significance of the cost difference between the two deduction methods with regard to the 11,000 claims in the backlog, we reviewed a sample of 100 compensate cases selected from the Washington, D.C. (mainly Norfolk, Virginia area cases), Jacksonville, and San Francisco District Offices, and from the Hearing Loss Task Force (mainly New York area cases at the time of our sample). These claims were filed in calendar years 1970 through 1976.

Over half (59) of the cases had an average decibel loss less than the fence in one or both ears. These 59 awards averaged $5,679, or $1,905 more than if the average deduction method had been used. We are unable to determine with statistical precision how representative this is of the total hearing loss backlog, but if the assumption were made that it is representative, and that 70 percent will receive compensation, the total difference in cost for these cases, between the two deduction methods would be about $9 million. (11,000 cases x 70% awarded x 59% with a loss less than the fence in at least one frequency x $1,905.)

OTHER STUDIES CONCERNING THE OWCP DEDUCTION METHOD

The Department of Labor's Internal Audit also commented on the computation of hearing loss cases under OWCP's formula in a letter to OWCP in May 1974. The internal auditors recommended that OWCP consider changing to the average method of deducting the fence.

The OWCP director declined to make this revision and defended his position with a letter on the subject from the Acting Chief, Noise Section Physical Agents Branch of NIOSH.

In the letter, the Acting Chief made several observations. He noted that the average method of deduction is most clearly related to hearing ability, and that the OWCP method would be slightly inequitable in some borderline cases - but not in cases of substantial loss, where both methods give essentially the same answer. In regard to the cases of substantial loss, he commented that it would be harder to declare either method as better

The OWCP director based his defense of OWCP's method on the Acting Chief's comment regarding it being harder to declare either method as better, and on a FECA program memorandum number 139, dated April 9, 1971 that gives the claimant the benefit of doubt when there is up to 10 percent difference between two audiogram .

The internal auditors disagreed with OWCP and stated that all claimants should receive all compensation to which they are entitled but no more. Consequently, in 1975 the auditors again reported the finding, this time to the Assistant Secretary for Employment Standards. The Assistant Secretary, however, concurred with OWCP's decision to keep its deduction method and cited the NIOSH letter as justification for not changing the method.

Also during 1974, the Department of Navy, because of its concern about the OWCP hearing loss formula and the increase in awards under it, requested CHABA to develop a new formula for hearing loss which could be used with the 1000, 2000, and 3000 Hertz frequencies. In March 1975, CHABA recommended the following formula:

> "For every decibel that the <u>average</u> of the pure-tone thresholds at 1000, 2000, and 3000 HZ exceeds 36dB relative to the American (ANSI) Standard of 1969, allow 1.75% in impairment of hearing up to a maximum of 100%. * * *"
> (Underscoring added)

CHABA also cited a study which made the point that, on the average, the hearing loss at the 3000 Hertz level would have to reach 53dB before any impairment is judged to exist. This is considerably higher than the 25dB fence currently being deducted at the 3000 Hertz level.

In October 1975, the Department of Navy wrote to OWCP suggesting that OWCP consider changing its method of awarding compensation for hearing loss. Navy cited the CHABA report as support for its suggestion.

OWCP rejected the CHABA recommendation on the basis that it showed no new studies but merely modified the formula to restrict the dollar compensation for neurosensory hearing loss.

OWCP did not, however, specifically argue against the "average" method contained in this formula.

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Two institutions that have developed criteria for hearing loss compensation, the AAOO and CHABA, both recommend deducting the fence from the average frequency readings. In addition, the 1972 NIOSH report on hearing loss conservation criteria, upon which OWCP bases part of its current compensation criteria, also describes that impairment begins when the average hearing level of the frequencies tested exceeds the fence.

The Acting Chief of NIOSH's Noise Section Physical Agents Branch also agrees that the average threshold is most closely related to hearing ability, and that the OWCP (each) method is slightly inequitable in borderline cases (cases in which both methods don't give the same answer--those without substantial loss). Of the compensation hearing loss cases we reviewed, 59 percent fit this borderline category.

In view of the support for the averaging method and the significant costs involved, we are bringing this matter to your attention for consideration before the completion of any future study on hearing loss compensation contemplated by OWCP.

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We would appreciate your comments on this matter, including any actions that you plan to take.

We wish to acknowledge the courtesies and cooperation extended to our representatives during our review.

Sincerely yours,

Frank M. Mikus
Assistant Director

cc: Secretary of Labor
Assistant Secretary for
Employment Standards
Director of Audit and Investigations