

WORK SAFE. FOR LIFE.
WORKERS' COMPENSATION BOARD OF NOVA SCOTIA

**Program Policy Background Paper:
Occupational Noise Induced Hearing Loss**

March 2014

TABLE OF CONTENTS

1. INTRODUCTION.....	3
2. PURPOSE OF THIS PAPER	3
3. PROGRAM POLICY INTENT AND RATIONALE	4
4. BACKGROUND.....	4
5. ISSUES	7
6. PROPOSED PROGRAM POLICY APPROACH	14
7. PROVIDING YOUR COMMENTS	15
Appendix A - Draft Program Policy – Noise Induced Hearing Loss	16

1. INTRODUCTION

In setting the program policy agenda, the Workers' Compensation Board of Nova Scotia (the WCB) undertakes a policy issue identification process. This process involves the identification of policy issues where the development of new and/or the revision of existing policies will improve consistency in decision making and/or assist the WCB in achieving its corporate/ system goals. Policy issues are identified through a number of sources including input from stakeholders, system partners, and internal WCB departments.

The existing Noise Induced Hearing Loss (NIHL) policy was originally approved in September 1999 and updated in March 2000. Since that time, the WCB and system partners have struggled with a lack of clarity and consistent principles in implementing this policy. As a result of this lack of clarity, NIHL has been raised as an issue internally by the WCB's Health and Extended Benefits (HEB) group over the past several years; and, in 2009 the Issues Resolution Working Group (IRWG), comprised of members of the WCB, the Workers' Advisers Program and the Workers' Compensation Appeals Tribunal, identified NIHL as a priority area for system dialogue with the intent of improving clarity and consistency. Because of this, NIHL was ranked as a high priority policy issue by the Board of Directors on the WCB Policy Agenda in both 2009 and 2011.

At their February 2013 meeting, the Board of Directors approved *Policy 1.2.5AR - Occupational Hearing Loss – Injuries on or after January 1, 2000* as the next high priority issue for policy development. At their September 2013 meeting, they approved staff moving forward with Stage 1 Policy Consultation. The Stage 1 Consultation Working Group met in January 2014, and provided valuable feedback on issues that were considered in developing this draft policy.

2. PURPOSE OF THIS PAPER

This paper is intended to provide an understanding of the current environment related to occupational noise induced hearing loss as well as other background information relevant to this topic. The attached draft program policy is intended to clarify the WCB's approach to determining if a worker has suffered an occupational noise induced hearing loss, resulting in consistent adjudication of claims and a reduction in the burden on the appeal system.

This paper kicks off Stage 2 consultation on this program policy topic. Stage 1 consultation took place on January 6, 2014 and involved a small working group made up of key stakeholders who have historically participated in Stage 1 consultation and have knowledge of, and experience, with NIHL. The working group had members from injured worker and employer groups and provided a well informed and balanced discussion about the issues with the current policy. The input received during this working group informed the development of the proposed draft "Noise Induced Hearing Loss" policy outlined in this paper.

Prior to finalizing this new program policy, the WCB welcomes feedback on both this paper and the attached draft policy. The Board of Directors will consider this feedback and will determine whether revisions are required to the draft program policy before making a final decision.

The consultation period for this issue concludes on **July 31, 2014**. Please review the background paper and draft program policy, and provide your written feedback by **July 31, 2014** to:

Kevin Foster
Manager of Strategy Support and Planning
WCB of Nova Scotia
PO Box 1150
Halifax NS B3J 2Y2
E-mail: Kevin.Foster@wcb.gov.ns.ca

This paper is also available at www.wcb.ns.ca under News & Events.

DEADLINE FOR COMMENTS: July 31, 2014

3. PROGRAM POLICY INTENT AND RATIONALE

The WCB and system partners have voiced concerns with a lack of clarity and consistent principles in the existing NIHL policy. Additionally, concerns have been raised that the current policy does not consider the growing expertise in this area of medicine, such as the American College of Occupational and Environmental Medicine (ACOEM).

Over the years, multiple issues have been identified with the policy both internally and by the Workers' Compensation Appeals Tribunal (WCAT). Many of which were echoed by the Stage 1 working group. Interpretation of the current policy creates a significant burden on the appeal system and introduces complexity with the adjudication of claims. Issues include:

- Consistency with the *Act*;
- Apportionment of impairment is complicated and unclear, including what the requisite degree of contribution should be (e.g. the "but for" test);
- The definition of "pattern consistent with NIHL" is not currently defined or aligned with a scientific expert, such as ACOEM;
- Deduction for presbycusis (age related hearing loss) is not currently in line with other jurisdictions;
- When screening audiograms are allowable as medical evidence; and,
- Section 83 (reporting timeline).

In 2009 the Issues Resolution Working Group (IRWG), comprised of representatives of WCAT, the Workers' Advisers Program (WAP) and WCB, attempted to improve the clarity and consistency of adjudication of noise induced hearing loss claims. After much discussion, the group recommended the WCB proceed with policy development, as many issues with NIHL were complex and required clarification via policy. The Board of Directors approved NIHL as a high priority policy issue both in 2009 and 2011 and in January 2014 the policy proceeded to Stage 1 of the consultation process. Through Stage 1, it became clear that this policy needs to be revised, and that there are a number of issues that must be addressed during this revision.

4. BACKGROUND

The WCB has experienced complexity in the adjudication of hearing loss claims for a variety of reasons:

- Hearing loss occurs over a period of time;

- Non-compensable factors, of which age is the most significant, can contribute to hearing loss making it difficult to accurately determine what portion is due to occupational noise; and
- Medical/scientific positions diverge on key diagnostic and adjudicative questions.

The WCB classifies NIHL as an occupational disease. Compensation for occupational diseases, according to Sec 12(1) of the *Workers' Compensation Act*, requires that a worker suffer either death, loss of earnings, or a Permanent Medical Impairment (PMI) in order to be entitled to compensation. However, per the WCB's NIHL policy (1.2.5AR), workers are currently entitled to Medical Aid in the form of hearing aids without meeting the occupational disease requirement of having a PMI. Therefore, opening the policy for revisions to address the adjudicative issues identified above requires the WCB to also address the legal inconsistency in the existing policy of providing Medical Aid (in the form of Hearing Aids) without a PMI.

What is Noise-Induced Hearing Loss (NIHL)?

The American College of Occupational and Environmental Medicine (ACOEM) defines occupational NIHL as:

*Occupational noise-induced hearing loss, as opposed to occupational acoustic trauma, is hearing loss that is a function of continuous or intermittent noise exposure and duration, and which usually develops slowly over several years. This is in contrast to occupational acoustic trauma, which is characterized by a sudden change in hearing as a result of a single exposure to a sudden burst of sound, such as an explosive blast.*¹

Since noise is a common condition in a variety of industrial sectors, NIHL is a prevalent occupational condition. However, numerous non-occupational factors may contribute to a person's hearing loss including: congenital conditions; conductive factors; noise exposure unrelated to employment; medication and presbycusis (age-related hearing loss). As a result, professional measurement and clinical diagnosis are critical factors in diagnosis.

The ACOEM principles influence practice and medical decisions; however, the language of the WCB's current NIHL policy does not align with, or reference, ACOEM's principles.

Scope of Impact

- In 2012, 666 hearing loss claims were registered with the WCB, (approximately 2.5% of the total WCB registered claims). Of the 666 registered hearing loss claims, approximately 50% were accepted for entitlement to Medical Aid (hearing aid) and 50% were denied entitlement.
- Between 2007 - 2012 on average 93 hearing loss appeals are filed annually at Internal Appeals, (approximately 4% of the total appeals at IA), and on average 37 of those go on to WCAT.
- The total cost of claims paid by the WCB in 2012 exceeded \$242M. While short term trends show significant variability, the cost of hearing loss claims exceeded \$5.8M in 2012. Moving forward, this annual cost will grow as new claims are added to the population.

¹ American College of Occupational and Environmental Medicine 2012 NIHL Position Statement

- The total cost for new claims for all injury types in 2012 was \$31.7M. Newly established hearing loss claims cost roughly \$1M in 2012. Approximately half of hearing loss costs are attributable to Permanent Impairment Benefits; the other half are medical aid costs including hearing aids and batteries.

The changes in the draft policy are not anticipated to significantly impact the scope of the Occupational NIHL policy. While some proposed changes will potentially increase the cost of NIHL benefits, other proposed changes will potentially decrease the cost of NIHL benefits. For more clarity, please see chart below:

Proposed Policy Change	Increase Cost	Decrease Cost
Address inconsistency between entitlement to occupational disease and to medical aid		Changing entitlement to medical aid to be in line with the definition of occupational disease will require workers to have a PMI in order to be considered for compensable hearing aids. This will affect approximately 80 workers moving forward. (new claims only)
Apportion benefits following the WCB's existing apportionment policy	Changing practice and apportioning as per Policy 3.9.11R1 will mean that apportioning out the non-compensable portions of hearing loss may not change the value of the PMI. This means a potential increase in PMIs paid for NIHL.	This change will reduce the number of claims that burden the appeal system moving forward.
Requirement for an audiogram within 5 years of leaving the noisy workplace.		This requirement mitigates the risk of removing the deduction for presbycusis by disallowing claims for workers who do not seek an audiogram until they have been out of the workforce for more than 5 years.
Remove deduction for presbycusis	Ceasing current practice of deducting 2dbs per year over age 60 will increase the number of workers who have 105dbs of loss and therefore reach the entitlement criteria for occupational disease. This increases both the number of PMIs awarded, and also the number of hearing aids provided.	

5. ISSUES

a) Stakeholder feedback

The Stage 1 Working Group on NIHL took place on January 6th, 2014. At a high level, the feedback/input provided by the working group included:

- In response to the Stage 1 paper, stakeholders had concerns about whether NIHL should be considered an occupational disease and requested additional information be provided during Stage 2 consultation;
- The acceptability of screening audiograms as evidence was raised by multiple stakeholders. This is not a true policy issue, as the issue is whether WCAT will accept screening audiograms; however, it is central to the issue of acceptable medical evidence so is addressed in this paper;
- In the same vein as the discussion surrounding screening audiograms, the standardization of workplace hearing programs was raised. This is outside of the scope of WCB policy and must be addressed by the Department of Labour and Advanced Education, who are responsible for the Occupational Health and Safety Regulations;
- The inconsistency between medical aid provided to workers with 100dbs of loss, vs a PMI award at 105dbs of loss was discussed by both employer and injured worker representatives;
- The issue of aligning with a medical/ scientific body such as ACOEM was raised and will be discussed in more detail in this paper;
- Concerns around a lack of clarity surrounding acceptable levels of asymmetry were raised by multiple group members who felt that they need to be addressed either on their own, or within the discussion about alignment with ACOEM;
- One stakeholder suggested that tinnitus should be compensated for without an acceptable hearing loss, and the definition should be changed. Tinnitus is currently compensable without an acceptable loss using *Policy 1.3.7 – General Entitlement – Arising out of and in the Course of Employment*; however the definition has been changed in the attached draft policy;
- It was proposed there may be a need for a WCB/ Audiologist joint committee to discuss issues. While this is outside of the scope of WCB policy, the value is recognized and will be considered by the Health and Extended Benefits department;
- Stakeholders had concerns with how presbycusis, or age related hearing loss, is currently being deducted in the existing policy. It was agreed that the way in which deductions are being made requires analysis before a new policy is implemented;
- There was agreement within the group that apportionment is currently causing a number of appeals. In these appeals, WCAT suggests that the WCB is not apportioning claims as per *Policy 3.9.11R1 - Apportionment of Benefits*. This will be analyzed in the context of policy development;
- Stakeholders agreed that the value of utilizing Robinson tables or ISO tables as a tool to assist with the apportionment process requires further analysis; and,
- Some stakeholders were concerned that there is a discrepancy between frequencies measured to diagnose noise induced hearing loss, and frequencies measured to assess permanent medical impairment and requested that this be looked at further in this paper.

The WCB has been mindful of this feedback in the development of the draft program policy.

b) NIHL policy is inconsistent with the *Workers' Compensation Act*/ NIHL as an occupational disease

There is a fundamental inconsistency in the existing NIHL policy between satisfying the criteria for an occupational disease and entitlement to medical aid. Entitlement to NIHL must therefore be adjudicated according to Section 12(1) of the *Workers' Compensation Act*, which requires either a loss of earnings, PMI, or death before a worker is entitled to compensation. In the case of NIHL, satisfying s. 12(1) is generally by way of PMI (as most workers' earnings ability is not impacted by hearing loss).

- In accordance with current NIHL policy, a worker is entitled to medical aid where the decibel sum of the hearing threshold levels of the audiogram (500, 1000, 2000, and 3000Hz) for the ear is 100dBs or greater. However, per the AMA Guidelines 4th Edition a worker does not have an impairment until they have a loss of hearing of at least 105dBs bilaterally.
- In practice, workers with a hearing loss of between 100dBs and 105dBs receive medical aid in the form of a hearing aid, even though they do not satisfy the criteria for an occupational disease, thus creating a discrepancy between the *Act* and Policy.

In 2012, 80 workers were awarded Medical Aid benefits as a result of showing 100dB of loss in one or both ears, but fell short of the AMA impairment rating (105 dB bilaterally). This group comprised about 24% of the approved hearing loss population for that year.

Changing the entitlement criteria such that a PMI is required in order to qualify for medical aid (i.e. hearing aids) would ensure that the policy is consistent with the *Act*, which is clearly desirable from an adjudicative practice (and arguably public confidence) standpoint. While this would appear to be more restrictive than current practice, other proposed changes to the policy would mitigate this impact, (e.g. removal of the deduction of presbycusis).

The WCB does not believe that it would be reasonable to stop classifying NIHL as an occupational disease. NIHL was classified as an industrial disease, now called occupational disease, in policy as early as 1982, and there is no evidence to suggest that it has been classified differently at any point in time. Additionally, NIHL shares many traits and challenges of occupational disease in that they are injuries that occur over time and potentially through multiple employers. This means that it is difficult to assign the cost of a claim to one employer. It would be difficult to justify a move away from classifying NIHL as an occupational disease given the historical context and the fact that NIHL meets the general requirements of an occupational disease.

Three other jurisdictions (BC, NL, and the NWT) classify NIHL as an occupational disease; however, because of the differences between their Acts and Policies, they may be able to provide Medical Aid to workers without a PMI.

To address the basic inconsistency between the entitlement to an occupational disease, and entitlement to medical aid, the WCB recommends changing entitlement to medical aid to be in line with definition of an occupational disease (recognizing a PMI, loss of earning, or death). This is a reasonable option because of the following:

- The intent of the original policy was to provide medical aid to workers with a PMI, the separate allowance for medical aid was likely an oversight;
- Changing entitlement to 105dBs is in line with the AMA Guidelines;
- This change would ensure the policy is consistent with the *Act*, and other policies;

- This would be a prospective change only.

c) Apportionment

The WCB is not intending to revise the *Apportionment of Benefits Policy* (Policy 3.9.11R1) at this time. It is discussed here as apportionment is a significant issue as it relates to NIHL. It is not specifically addressed in the NIHL policy, because hearing loss is required to be apportioned in the same manner as any other injury/ disease – by following Policy 3.9.11R1 which outlines how to apportion non-medical factors.

In Nova Scotia, occupational diseases must follow Policy 3.9.11R1, as has been upheld by WCAT, and there would have to be a compelling reason that draws a clear distinction/ rationale as to why NIHL is different than all other occupational diseases. Policy 3.9.11R1 instructs the WCB to determine the portion of the permanent impairment as follows:

- (a) Determine the total permanent impairment rating using the applicable permanent impairment rating schedule in accordance with [Policy 3.3.2R2](#) (Permanent Impairment Rating Schedule).
- (b) Assign the impairment that results from the non-compensable factor(s) a permanent impairment rating and subtract this from the total permanent impairment rating to determine the portion of permanent impairment that is compensable.

In a number of recent decisions, WCAT has confirmed this approach to apportioning the PMI rating in hearing loss situations, basing their decision on section 4.3.1 of Policy 3.9.11R1:

First, one must calculate the total or global PMI rating, which includes the impairment caused by both compensable and non-compensable factors – for example, a global PMI rating of seven percent. Second, one must calculate the PMI rating due to non-compensable causes – for example, a non-compensable component of two percent. Third, one must subtract the PMI rating which would arise due to non-compensable reasons from the total or global PMI rating. In this example, seven minus two would give rise to a PMI rating of five percent based on apportionment principle.

When applying the apportionment policy in practice the results may remain the same as before apportionment. For example; a PMI rating for hearing loss occurs at a minimum of 105dB which equates to a 1% PMI. In either of the following situations, when applying the apportionment policy the results are unchanged, leaving case workers with no tools to quantify the non-compensable component.

- 1) The non compensable factors alone total less than 105dB (a near certainty)
- 2) The non compensable factors cannot be reasonably estimated (very likely)

Perhaps the most significant issue facing adjudicators is the timing of apportionment. In other words, whether non compensable factors/ causes should be considered and accounted for before or after entitlement is determined. The issue arises when the combined compensable and non-compensable factors contributing to the global hearing loss exceed the minimum threshold for PMI but the compensable share alone is insufficient to meet the threshold for NIHL PMI. This leaves adjudicators in a difficult position of addressing the question of how the apportionment policy should be applied in NIHL cases, in terms of whether non compensable hearing loss should be apportioned prior to or after the conditions of entitlement are met.

Another adjudicative difficulty is often encountered when one ear is significantly worse than the other, and this difference is attributed to non compensable factors. Currently, WCAT suggests that this should be apportioned as per the apportionment policy. However, unless the worker's exposure is significantly unique (featuring a fixed noise source relative to the head), science suggests that the better ear is more representative of workplace NIHL. If that is assumed, then the level of loss in the better ear should be used to determine a PMI.

It appears that most other jurisdictions do not apportion hearing loss claims, and if they do it is not with the use of a tool or table. For example, British Columbia uses "Robinson Tables" and has their own Industrial Audiogram Program, which is used to assist in apportionment; however, most jurisdictions do not use a table or formula to determine apportionment. Rather, most are more concerned with entitlement criteria and only accepting claims that are true examples of noise induced hearing loss that is caused by work.

In an effort to keep the NIHL policy clear and consistent, it is not recommended that the policy deal specifically with apportionment. Rather, it is recommended that the WCB apportion NIHL claims as per the WCB apportionment policy (3.9.11R1).

- d) The definition of "pattern consistent with NIHL" is not currently aligned with a scientific expert, such as ACOEM

Many appeals on NIHL claims are initiated on challenges to the WCB's interpretation of "a pattern consistent with an occupational NIHL," a criteria of Policy 1.2.5AR. To avoid subjective interpretation of this clause, there is value in exploring the formal adoption of the ACOEM guidance statement on Noise Induced Hearing Loss. This 2012 publication is the third iteration of an evidence-based expert consensus statement, based on the experience and professional opinions of world-renowned Occupational Noise Induced Hearing Loss Experts to provide diagnostic guidance to practicing physicians.

ACOEM provides a set of characteristics which could be referenced as an adjudicative guideline for the sake of equity, fairness, consistency of practice, simplicity and efficiency. WCB has consulted authors of the ACOEM statement to review and critique this application of their work, and received solid endorsement in that regard.

During the Stage 1 working group, while stakeholders agreed that ACOEM provides useful and scientific guidance, some concerns were raised with this. Specifically, concerns surrounded ACOEM's use of the word "typically" when describing asymmetry. It was suggested that the asymmetry may be beyond the 10-15dbs that is currently recognized by the WCB in some circumstances, and that this will not be recognized if ACOEM is used as guiding principles. Current practice is to recognize a difference of 10-15dbs between the better ear and poorer ear, but to put this number in policy would potentially exclude workers whose asymmetry is slightly above and yet still has an acceptable claim based on the individual merits and justices of their case. ACOEM's use of the word "typically" does not restrict the WCB from continuing with its current practice of recognizing a 10-15db difference, and therefore it is not necessary to specifically define this in policy.

According to ACOEM, *"The diagnosis of NIHL is made by the OEM physician, by first taking into account the worker's noise exposure history and then by considering the following characteristics."* One of the specified characteristics is that: *"It is typically bilateral, since most noise exposures are symmetric."*²

² ACOEM Guidance Statement, Occupational Noise Induced Hearing Loss, 2012

The leading and most widespread research - cited by authorities such as ACOEM and directly reflected in the policies of other Canadian WCB jurisdictions - indicates that a noise induced hearing loss will be symmetrical, except in situations where one ear is consistently exposed to significantly more noise, such as with the use of headphone or firearms.

Jurisdictions like ON, NWT, NL, and SK will accept slight levels of asymmetry, but do not specify how much. AB specifies that they will accept asymmetry of less than 20dbs, BC less than 15dbs, and MB less than 10dbs. Workplace noise induced hearing loss is not generally considered to be asymmetrical beyond a small degree.

It is recommended that the WCB align the pattern of NIHL with the characteristics provided by the ACOEM Guidance Statement.

e) Reporting Timelines

One of the significant challenges for the adjudication of NIHL is that workers often do not file a claim until they have been out of the workforce for many years. At this point, it is difficult to separate occupational hearing loss from other factors such as recreational noise exposure, age and certain medications. This is an important consideration in light of the fact that age has been proven to be the most significant contributing non occupational factor to hearing loss and the longer a worker is outside of the workforce, the greater the increase in age related hearing loss.

Both PEI and NL require workers to provide an audiogram within 5 years of leaving the workplace location. The Yukon will not consider claims for compensation if more than 2 years have passed since exposure, unless either a screening audiogram or a full audiological assessment was performed during that time and is now available.

Under section 83 of the *Act*, if the injury is an occupational disease, the worker must:

- give notice of the injury to the employer as soon as practicable after the worker learns that he or she suffers from an occupational disease; and
- make a claim for compensation within 12 months of the worker learning of the occupational disease for which compensation is claimed.

The WCB may extend the time for filing a claim, but not beyond five years from the date of the accident or from when the worker learned of the occupational disease.

Determining the meaning of when the injured worker learns that they have an occupational disease is a central issue to both the date of injury and the timeline for filing a claim. The phrase “when the worker learns” can be interpreted in different ways; it is possible that interpretations can result in workers being able to file claims significantly after the worker has left their employment. Current practice within the WCB is to use the date of medical evidence as the date of accident. WCAT seems to be in agreement on this, however there are still challenges and inconsistencies surrounding when the audiogram was performed.

The WCB recommends that it is not unreasonable to set a limit on how long, after leaving the noisy workplace, a worker would be aware that they suffer hearing loss. Therefore, a requirement for an audiogram within 5 years of leaving the noisy workplace has been considered in the attached draft policy, as it helps to mitigate concerns surrounding apportioning for age related or non occupational noise exposure.

f) Screening Audiograms

The issue of screening audiograms as medical evidence was raised by the Stage 1 Working Group. Typically, WCAT does not consider them to be reliable because:

- The circumstances of the testing are often less than ideal (not in a soundproof room for example);
- Testing is often done by someone other than a trained audiologist or someone with unknown qualifications; and,
- There is usually no information about whether the audiometer had been recently calibrated.

After the Working Group met, WCB staff brought these concerns back to the Appeals Issue Discussion Group (AIDG). From this discussion, it is clear that while WCAT is not able to provide further clarification as to what types of screening audiograms will be accepted, they are willing to consider screening audiograms if evidence can be provided on issues such as: the calibration and type of equipment used, the qualifications of the specialist providing the audiogram, and the environment where the audiogram took place.

The WCB applauds the efforts of many employers who have implemented hearing conservation programs, which may include regular screening audiograms, and strongly encourage others to consider implementing similar programs that measure, monitor, prevent and protect workers from excessive noise. All information on programs like these should be well documented and records kept for future reference as all evidence is certainly relevant to claims issues.

In strengthening the employers hearing conservation program, many may wish to consider diagnostic audiograms, conducted by a qualified external audiologists/hearing clinic, for all workers upon retirement as a means to supplement their existing records.

g) Presbycusis

The issue of whether or not presbycusis, or age related hearing loss, should be deducted from a worker's global hearing loss was raised through the Stage 1 consultation, and has also been seen recently at WCAT.

Policy 1.2.5AR states:

A presbycusis factor of 2 decibels shall be deducted from the decibel sum of the hearing threshold levels of the audiogram (500, 1000, 2000 and 3000 Hz) for each year the worker's age exceeds 60.

There is no consistent means of dealing with presbycusis across Canada and the AMA 5th edition specifically states that this deduction should not be made. There are five Canadian jurisdictions that do not deduct for presbycusis at all, two of which removed their deduction from policy when they adopted in the AMA 6th edition.

British Columbia does not have a formal presbycusis factor that would be deducted from the hearing loss; however, their policy does indicate that presbycusis is a factor that could be considered when a deciding whether a worker's hearing loss was caused by their employment.

There are three jurisdictions who do have a calculation for deducting for presbycusis.

- NL allows for a 0.5dB reduction for each year over age 75
- ON deducts 0.5db for every year the worker is over age 60
- MB uses the following calculation: multiply the number of the worker's years over the age of 60 by 2. Then deduct the product from the sum of the value of the hearing levels at 500, 1000, 2000 and 3000 Hz in each ear.

The AMA 4th edition, which is used by the WCB in Nova Scotia, does not address presbycusis, which means that the practice of the WCB is not actually inconsistent. However, in light of the arguments above, the attached draft policy does not include a factor for presbycusis.

h) Frequencies Measured

The frequencies that provide the best indication of a permanent medical impairment (500, 1000, 2000 and 3000Hz) are not perfectly matched with those that indicate hearing loss due to noise exposure (3000, 4000 and 6000Hz).

Eight other jurisdictions measure the same frequencies as Nova Scotia. PEI, NL, ON, MB, NWT, and SK measure these frequencies for entitlement to compensation for NIHL, whereas NB and AB specify that these frequencies are measured for PMI.

BC measures 500, 1000, and 2000Hz, but excludes 3000Hz to measure entitlement to compensation for NIHL.

Yukon measures 1000, 2000, 3000, and 4000Hz, but excludes 500Hz to measure entitlement to NIHL.

The frequencies that show a pattern consistent with noise induced hearing loss are not the same as those used by the AMA Guides to rate impairment, and no jurisdiction measures the exact frequencies that indicate hearing loss due to noise, so Nova Scotia's frequencies tested are in line with the majority of Canadian jurisdictions. Therefore, no change is recommended in the draft policy.

i) Tinnitus

The majority of the other jurisdictions in Canada, as well as the *AMA Guides*, provide scheduled awards for tinnitus associated with noise-induced hearing loss. However, none of the other jurisdictions or the *AMA Guides* requires that a worker have a prerequisite amount of noise-induced hearing loss before an award for tinnitus is available. The WCB appears to be in line with other jurisdictions in terms of adjudicating tinnitus and no policy change is recommended.

During the Stage 1 working group, it was raised that the definition of Tinnitus be changed to say: Sounds heard in one or both ears or in the head (central tinnitus) in the absence of an external stimulus. Can include sounds like a ringing, roaring, hissing, or buzzing. The WCB is in agreement, and has made this change in the attached draft policy.

6. PROPOSED PROGRAM POLICY APPROACH

The WCB proposes a revised Noise Induced Hearing Loss policy be implemented that will identify and communicate the factors/criteria the WCB considers in determining whether a worker has suffered an occupational noise induced hearing loss (See Appendix 2 for DRAFT policy). The following is a high-level overview of the proposed revisions.

Definitions

The attached draft policy includes 2 changes to definitions. First, the definition of Tinnitus has been changed as per stakeholder feedback during the Stage 1 consultation. Secondly, it includes a definition for ACOEM, which is now referenced in the policy.

Policy Statement

The wording of this section has been changed to better explain what is meant by “occupational disease” and to clearly outline entitlement criteria for a compensable noise induced hearing loss claim.

No changes have been made to the frequencies measured.

The entitlement criteria have been set out in a staged process, in an attempt to clarify how claims are adjudicated and what criteria a worker must meet in order to have their hearing loss considered for compensation.

The pattern of hearing loss is now required to be consistent with the ACOEM Guidance Statement, some of the criteria of which are now outlined directly in the policy for clarity.

A requirement that the worker must have an audiogram, which shows a noise induced hearing loss, performed within 5 years of leaving the noisy workplace in order to be considered for entitlement to NIHL, as per both Newfoundland and PEI’s policies, has been included.

The deduction for presbycusis has been removed.

The allowance for medical aid without a PMI has been removed, as this was in contravention to the *Act*.

The definition of Tinnitus has been changed to better reflect current medical science.

The requirement for entitlement to tinnitus, under section 6.2, was expanded to say “There is a clear and adequate medically documented history...”

Application and references

The only change to this section is the addition of a reference to *Policy 1.2.14 - General Entitlement – Occupational Disease Recognition*, which was not in effect when the existing NIHL policy was created.

7. PROVIDING YOUR COMMENTS

We are interested to hear your comments on this proposed program policy and the information presented in this paper. In particular, we encourage you to consider whether there **are any recommended changes or additional topics you would like to see addressed in the proposed “Occupational Noise Induced Hearing Loss” program policy.** Comments received will assist the WCB in ensuring all the issues are considered in the development of this program policy.

You can provide comments in 2 ways:

1. By e-mail: Send comments to Kevin Foster at Kevin.Foster@wcb.gov.ns.ca; or
2. In writing to:

Kevin Foster
Manager of Strategy Support and Planning
Workers' Compensation Board of Nova Scotia
PO Box 1150
Halifax NS B3J 2Y2

Phone: (902) 491-8365
Fax: (902) 491-8345

The deadline for comments is **July 31, 2014**

Appendix A
Draft Program Policy – Noise Induced Hearing Loss

**POLICY 1.2.5AR1 - OCCUPATIONAL HEARING LOSS - INJURIES
ON OR AFTER XXXXXXXX**

Effective Date: XXXXXX

**Topic: Occupational Hearing
Loss – Injuries on or
after January 1, 2000.**

Date Issued: XXXXXXXX

Section: Entitlement

Date Approved by Board of Directors: XXXX

Subsection: Occupational Disease
n:

DEFINITIONS

Noise-Induced Hearing loss

Noise-induced hearing loss means the gradual deterioration of hearing as a result of exposure to hazardous noise over a period of time.

Traumatic Hearing Loss

Traumatic hearing loss means hearing loss caused by trauma (i.e. a loud, sudden explosion, or a blow to the head).

Tinnitus

Sounds heard in one or both ears or in the head (central tinnitus) in the absence of an external stimulus. Can include sounds like a ringing, roaring, hissing, or buzzing.

American College of Occupational and Environmental Medicine (ACOEM)

ACOEM is the largest national college of its type in the United States that comprises a group of physicians encompassing specialists in a variety of medical practices to develop positions and policies on vital issues relevant to the practice of preventive medicine both within and outside of the workplace. It is considered the medical expert in occupational medicine.

POLICY STATEMENT

1. Noise-induced hearing loss (NIHL) is recognized as an occupational disease and must arise from an industrial process, trade or occupation wherein the noise exposure and hazard is characteristic of or peculiar thereto. This means that in addition to meeting the entitlement criteria set out in this policy, the injury must meet the definition of occupational disease set out in the *Workers' Compensation Act* and Policy 1.2.14 – General Entitlement – Occupational Disease Recognition.

2. Claims for occupational NIHL will be considered as follows:

Step 1: The worker has a history of occupational exposure to noise levels in excess of the acceptable noise exposure levels outlined in Policy 1.2.6R. Where actual noise levels are unavailable the Workers' Compensation Board may estimate the expected noise levels based on the information obtained from similar industries or types of work. Workers who have not been exposed to these levels will not receive compensation for noise induced hearing loss because their hearing loss is not occupational.

Step 2: After it has been determined that a worker was exposed to occupational noise, the worker must provide audiogram evidence that shows a pattern consistent with noise-induced hearing loss, as per the current ACOEM Guidance Statement. In determining a pattern consistent with noise-induced hearing loss, the WCB uses the ACOEM Guidance Statement³ as highlighted by the following characteristics:

- It is always sensorineural, primarily affecting the cochlear hair cells in the inner ear;
- It is typically bilateral, since most noise exposures are symmetric;
- There is insufficient evidence to conclude that hearing loss due to noise progresses once the noise exposure is discontinued. Nevertheless, on the basis of available human and animal data, which evaluated the normal recovery process, it is unlikely that such delayed effects occur.; and
- Its first sign is a "notching" of the audiogram at the high frequencies of 3000, 4000, or 6000 Hz with recovery at 8000 Hz.

Acknowledging some variance in specific cases, if the occupational NIHL does not meet the above pattern of hearing loss, the claim will not be accepted because the hearing loss is not caused by occupational noise.

Where the worker is no longer exposed to excessive workplace noise, the worker must have an audiogram, which shows a noise induced hearing loss, performed within 5 years of leaving the workplace location with the excessive noise, to be considered for noise induced hearing loss.

Step 3: After it has been determined that the worker was both exposed to occupational noise and has hearing loss showing a pattern consistent with NIHL, it must then be established that the worker meets the definition of occupational disease by satisfying one of the following criteria: death, loss of earnings, or a permanent medical impairment. To determine a permanent medical impairment, hearing loss shall be assessed, evaluated, and rated on the basis of an audiogram, as specifically plotted. Hearing loss levels shall be tested at the four measured frequency levels of 500, 1000, 2000 and 3000 Hz. If the worker does not meet the requirements of an occupational disease, the claim will not be accepted because the worker does not have an injury that

³ [Occupational Noise-Induced Hearing Loss](#), 2012

meets the requirements under the *Workers' Compensation Act* and related policies.

4. Medical Aid in the form of a hearing aid shall be provided to a worker for hearing loss when necessary if they have a compensable noise induced hearing loss.
5. The existence and degree of a worker's permanent medical impairment rating for noise induced and traumatic hearing loss will be determined using the American Medical Associations "Guides to the Evaluation of Permanent Impairment – Fourth Edition" (the "AMA Guides").

Tinnitus

6. To establish entitlement to a permanent impairment rating for tinnitus caused by noise-induced hearing loss the following circumstances must apply:
 - 6.1. There is an acceptable claim for occupational noise-induced hearing loss; and
 - 6.2. There is a clear and adequate medically documented history of two or more years of continuous tinnitus.
7. Claims for tinnitus caused by occupational factors other than noise-induced hearing loss will be adjudicated as per *Policy 1.3.7 – General Entitlement – Arising out of and in the Course of Employment*.
8. To determine an impairment rating for tinnitus the Board shall use the American Medical Associations "Guides to the Evaluation of Permanent Impairment – Fourth Edition" (the "AMA Guides").

APPLICATION

This Policy applies to claims made on or after XXXXX XX, 2014.

This Policy replaces Policy 1.2.5AR, approved by the Board on March 16, 2000.

REFERENCES

[Workers' Compensation Act](#) (Chapter 10, Acts of 1994-95), (as amended), Sections 2(v), 10, 12, 102. [Policy 1.2.6R](#). Policy 1.2.14. Policy 1.3.7.