Occupational Noise Induced Hearing Loss:

Final Program Policy Decision and Supporting Rationale

October 2014
I - Introduction:

In September 2012, the WCB Board of Directors added Noise Induced Hearing Loss (NIHL) to the Revolving Program Policy Agenda. The Health and Extended Benefits department of the WCB, the Workers’ Advisors Program, and the Workers' Compensation Appeals Tribunal had all identified NIHL as a high priority policy issue. This topic was added to the agenda because of the volume of appeals relating to hearing loss, policy issue between the WCB and other system partners in interpreting application of policy, and a lack of clarity in appropriate approach of the existing policy.

In February 2013, the Board approved Policy 1.2.5AR – Occupational Hearing Loss—Injuries on or after January 1, 2000 as the next high priority issue. At the September 2013 meeting, the Board approved proceeding 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 the development of the draft policy.

Occupational Hearing Loss (Policy 1.2.5AR) was opened for consultation from March 27 to July 31, 2014. The document “Consultation on Draft Revisions to Policy 1.2.5AR Occupational Hearing Loss – Injuries on or after January 1, 2000” was mailed to stakeholders on March 27, 2014.

The Issues Clarification Paper and Policy Background Paper can be found on the WCB website at www.wcb.ns.ca.

The remainder of this report provides:

- key issues raised by stakeholders during Stage 2 consultation on the proposed draft program policy;
- the rational for why the WCB did or did not revise the draft program policy “Occupational Hearing Loss—Injuries on or after January 1, 2000” in response to stakeholder submissions received as a result of Stage 2 consultation; and
- the WCB’s final policy decision as reflected in the final version of the program policy – Appendix B.

II - Issues Raised During Stage 2 Consultation:

The WCB received four stakeholder submissions in response to the consultation. One of the submissions was endorsed by twenty organizations or businesses. Injured worker and labour stakeholders made two submissions and employer stakeholders made two submissions.

For a detailed overview of feedback from stakeholders, please see Appendix A.

The WCB appreciates feedback from all stakeholders. Most of the feedback received was on the following topics:

- Audiograms
- Tinnitus
- Presbycusis
- Occupational disease
- Noise type and noise exposure
- Adjudication of NIHL claims
Some of the feedback was beyond the scope of the consultation or the proposed policy and therefore not explicitly addressed in this document. These topics included:

- The timing of the consultation.
- Consultations by other organizations.
- Legislative or regulatory changes.
- Jurisdictional concerns and claim cost sharing between provincial or territorial Workers’ Compensation Boards.
- References to strategies or manifestos.
- Programs that are not within the WCB mandate to provide or promote.
- Legal rights of employees or employers under the *Workers’ Compensation Act*.
- Hearing loss that is not noise induced or over period of time.

In this paper, the WCB will respond to the feedback raised in the order the topic appears in the draft policy.

**III – Summary of changes made to “draft” policy language based on Stage 2 consultation:**

After considering the feedback received, the Board of Directors has decided that further revisions and refinement to the draft NIHL policy is required to increase clarity of intent and language. Specifically, four changes have been made to the draft policy in response to the feedback from the consultation. The changes are as follows:

- Definitions amended to reflect only topics within the scope of the policy (adding a definition for ‘sensorineural’ and removing a definition for ‘traumatic’ hearing loss).
- Clarification on “excessive workplace noise” to mean “sound levels in excess of permissible exposure”.
- Clarification that audiograms typically test for hearing loss between 250-8000 Hz, but that the PMI for NIHL will be indicated at four frequencies: 500, 1000, 2000, and 3000 Hz.
- Clarification that the date of the audiogram confirming NIHL will be used as the accident date.

**IV – Stakeholder Feedback, Analysis, and Response:**

◀ Issues regarding clarifying what the policy covers and required definitions

#1: Employers expressed concerns that the proposed NIHL definition omits relevant language respecting the type of sound that is compensable under NIHL (steady state noise, impact/impulse noise) and that inserting additional terminology provides clarity respecting the type of sound exposure that is compensable under the policy.

#2: Employers felt that the definition for NIHL should be consistent with the language used by Occupational Health and Safety that is also found in WCB Policy 1.2.6R- Workplace Noise Levels.
#3: Employers felt it was necessary to define “sensorineural hearing loss” as this is the only hearing loss caused by exposure to noise over time.

#4: Concerns that the proposed definition for “traumatic hearing loss” is outside the scope of the draft policy and therefore should be removed.

#5: Employers raised a concern that if the definition of “traumatic hearing loss” remained in the definition section, it was important to also include a definition of “conductive hearing loss”.

**Analysis and Response:**

The Board believes that all policies should be clear and concise in order to ensure consistent and effective adjudication. The current definition of NIHL is appropriate as it covers the gradual nature of the loss over a period of time, and aligns with other occupational diseases. Expanding the policy language to include qualifiers related to the type of sounds is not necessary, as the acceptable sound levels and types are already and appropriately defined in Policy 1.2.6R – Workplace Noise Levels.

The term “sensorineural hearing loss” is currently referenced in the draft policy as part of the ACOEM Guidance Statement. However, some stakeholders felt it was necessary to define the term in the definitions section. Based on this feedback and to provide greater clarity in the use of the term, a definition of “sensorineural hearing loss” has been added to the final policy.

The draft policy is only for entitlement to NIHL caused by gradual loss of hearing over time due to noise. Other forms of hearing loss such as “conductive hearing loss” and “traumatic hearing loss” are adjudicated in accordance with Policy 1.3.7 – General Entitlement – Arising out of and in the Course of Employment. Therefore, it is agreed that defining these terms in this policy is not necessary and have been removed from the final policy.

**Issues regarding classification of NIHL as an occupational disease**

#6: Employers agreed with the recommendation that NIHL should remain being classified as an occupational disease, whereas Labour felt it would be more prudent to classify NIHL as a workplace injury rather than an occupational disease.

**Analysis and Response:**

The Board acknowledges that there are considerations for classifying NIHL as an injury or an occupational disease. NIHL was classified as an industrial disease, now called occupational disease, in policy as early as 1982. Additionally, NIHL shares many traits and challenges of occupational diseases in that they are injuries that occur over time and potentially through multiple employers.

For the reasons cited above the Board believes that NIHL is properly classified as an occupational disease and should be adjudicated accordingly. To remain consistent with previous policies and to reflect the over period of time nature of the disease, NIHL will remain classified as an occupational disease.
### Issues regarding adjudication

**#7:** Employers suggested that hazard control and alternate causes should be considered in adjudicating NIHL claims.

**#8:** Labour groups were concerned that workers had to provide proof that they worked in a noisy environment.

**Analysis and Response:**

While noting hazard controls at a workplace might help identify other factors that may have contributed to hearing loss, employers are still obligated to provide a safe workplace for employees. Hazard control and prevention is an obligation under the *Occupational Health and Safety Act*. While hazard control is necessary, it may not prevent or mitigate NIHL due to a number of factors such as effectiveness of the chosen protection, proper and consistent usage or compliance.

The WCB strongly encourages employers to mitigate risks of injuries by implementing preventative measures and safe workplace practices, as this is the key to preventing workplace injuries and in turn avoiding related compensation costs. However, not unlike other types of injuries, entitlement to compensation is not barred simply because employers have implemented hazard controls, provided proper training and PPE. When adjudicating a NIHL claim the WCB gathers evidence to determine whether the worker suffers from an occupational disease that arose out of and in the course of employment. In gathering evidence the WCB may consider, among other things, issues such as exposure to occupational noise, medical evidence, evidence of alternate cause(s) and impairment to assist in determining whether employment caused NIHL, as outlined in Policy “1.2.14 – General Entitlement – Occupational Disease Recognition”.

In filing a claim for NIHL, the worker is not required to provide proof of decibel exposure. The process for filing a claim for NIHL includes completion of an Occupational Hearing Loss Injury Report, which may include a detailed work history. Confirmation of decibel exposure is acquired from the employer, and if the information is not available the WCB may estimate the expected noise levels based on the information obtained from similar industries or types of work. Because the WCB can estimate noise levels of a workplace, there is no unfair burden on the worker to provide exact decibels of noise to which she or he was exposed.

### Issue regarding information for workers on audiograms

**#9:** Labour groups were concerned that workers would not be informed of the requirement to get an audiogram and the consequences if they don’t get an audiogram.

**Analysis and Response:**

One of the new policy requirements is that a worker must have an audiogram performed within 5 years of leaving the workplace with excessive noise. Therefore, it is recognized that communication around the new policy requirements is essential.
Recognizing that work related NIHL does not worsen once leaving the workplace, workers who are experiencing NIHL should be aware of the condition at the time of departure and therefore they could contact the WCB or visit the website to determine the application process. As part of our regular practice information on the new policy will be communicated to all policy manual holders as well as notification on our corporate website.

**Issue regarding characterization of NIHL as “typically bilateral”**

#10: Employer groups felt that the ACOEM Guidance Standard is controversial because they use “typically” when describing asymmetry and that the policy should have only clearly defined parameters.

**Analysis and Response:**

As there is no scientific agreement for what number “typically” may represent, there is no number that can be assigned that is keeping with the ACOEM standard. This is reflected in a jurisdictional scan of the other the Canadian Provinces and Territories where there are a number of different policies or approaches for the allowable variance. However, that being said most jurisdictions do allow for some variance. To ensure due consideration of the merits of each individual case, the WCB will use a variance approach in which we acknowledge some variance is acceptable in specific cases.

**Issue regarding the use of language to describe noise**

#11: Employer groups requested changing the words “excessive workplace noise” to the words “sound levels in excess of permissible exposure according to WCB Policy 1.2.6R”.

**Analysis and Response:**

In the draft policy language the use of the words “excessive workplace noise” was referenced in the section describing the situation when a worker left a noisy environment. The Board agrees that it is important to use consistent language in policy for clarity and transparency. The revised policy now references excessive workplace noise as “workplace noise in excess of permissible levels” as per Policy 1.2.6R throughout the Policy.

**Issue regarding screening audiograms**

#12: Employer groups were concerned that screening audiogram evidence was not accepted at WCAT and that the WCB should incorporate in policy a provision respecting the relevance of screening audiogram evidence.

#13: Employer and labour groups were concerned with the time limit for obtaining an audiogram, believing 5 years to be either too short or too long.
Analysis and Response:

The issue of screening audiograms as medical evidence was raised by the Stage 1 Working Group and through Employer feedback to the Stage 2 consultation. As previously addressed in the Stage 2 consultation document, it was acknowledged that WCAT has typically not considered screening audiograms as 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.

That being said, all evidence is relevant to claims adjudication and is considered according to Board Policy 1.4.3 – Weighing Conflicting Medical Evidence. The Board strongly encourages Employers that conduct regular screening audiograms to maintain records documenting the concerns cited by WCAT.

A time limit is critical to balancing the interests and rights of both the employer and the worker. 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. Therefore, the Board believes that a requirement for an audiogram within 5 years of leaving the noisy workplace is not unreasonable as a worker would be aware that they suffer hearing loss.

Issue regarding NIHL PMI and hearing aids

#14: Labour organizations were concerned that the proposed policy raises the threshold for a PMI from 100 to 105 decibels and disentitles workers to benefits.

#15: Concern from labour groups that workers who have hearing loss with no PMI may not be physically safe at their work places and may be discriminated against.

Analysis and Response:

The WCB classifies NIHL as an occupational disease therefore claims must be adjudicated according to Section 12(1) of the Act, which requires either a loss of earnings, PMI or death before a worker is entitled to compensation. The WCB cannot provide medical aid in the form of hearing aids unless one of these criteria is met, (generally by way of PMI as most worker’s earnings ability is not impacted by hearing loss). The intent of this clause is not to exclude workers from medical aid, but to bring the WCB policy into compliance with the Workers’ Compensation Act.

There are provisions for those with disabilities (which may or may not constitute a PMI) under the Human Rights Act and include the illegality of discrimination. The Occupational Health and
Safety Act also has provisions for ensuring the safety of all staff members, both by employers and by employees.

Safety is important and employers and workers should ensure appropriate measures are taken to create safe workplaces. The WCB encourages those with hearing loss to obtain appropriate medical aid. However, the intention of the Act (Policy) is to determine if there is an injury that arose from employment and for the purposes of occupational disease claims entitlement to benefits requires a PMI, earnings loss or death.

**Issue regarding frequency of testing levels**

**#16:** Employers request that the policy state that audiograms provided to the WCB demonstrate measurement at all relevant frequencies.

**Analysis and Response:**

Standard audiogram tests include the frequencies of 250-8000 Hz and are used in the adjudication of claims to determine if the hearing loss pattern in the audiogram is consistent with NIHL. Once it is determined that the pattern of the audiogram is consistent with NIHL, the Board then assesses the four measured frequencies of 500, 1000, 2000, and 3000 Hz to determine if a PMI exists.

The revised policy language now reflects the two distinctive uses of the frequencies in the adjudication of the claim in Step 2 and Step 3.

**Issue regarding using the date of audiogram as injury date**

**#17:** Employers requested the inclusion of a provision stipulating that screening audiograms can be used to establish the date of accident.

**Analysis and Response:**

In keeping with other occupational diseases, the date of accident for establishing a claim for NIHL is the date the worker becomes aware of the occupational disease. The new requirement under this policy is that an audiogram must be completed within 5 years of leaving a noisy workplace in order to be considered for entitlement. If it is through a screening audiogram that the worker becomes aware of NIHL, then the date of this report would typically be considered the accident date. The revised policy language now reflects the following in Step 2 of the policy; “The date of the audiogram indicating NIHL will be considered the date of accident for adjudication purposes.”


**Issue regarding the use of the AMA Guides**

**#18:** Employers are concerned that the AMA Guides are not an accurate measure of a worker's impairment for NIHL claims.

**Analysis and Response:**

The WCB uses the AMA Guides for assessing all other PMIs and is accepted as the measure of medical impairment as it relates to compensation under our system.

**Issue regarding tinnitus**

**#19:** Employers request that tinnitus be excluded from this policy as it solely a symptom and must be connected to a compensable injury.

**Analysis and Response:**

In the spirit of transparency and clarity, it is believed that the inclusion of tinnitus is appropriate. Tinnitus is included because it is directly related to NIHL and the policy clarifies the condition under which it will be considered for compensation. The previous NIHL policy included tinnitus. Tinnitus is only mentioned as it relates to a NIHL PMI. Further, the policy is explicit in directing non-NIHL tinnitus claims to Policy 1.3.7—General Entitlement—Arising out of and in the Course of Employment.

**Issue regarding presbycusis**

**#20:** Employers felt that a presbycusis deduction should remain in the policy as age-related hearing loss should not be included when determining benefit entitlement. Labour groups felt that presbycusis should not be included.

**Analysis and Response:**

The ACOEM does have guidelines on identifying presbycusis (versus NIHL) in an audiogram, but refrains from providing a deduction. The AMA 5th Edition explicitly states that no deduction should be made for presbycusis. There is no best practice methodology for determining the rate of presbycusis. A jurisdictional scan of other Canadian Provinces and Territories indicates that currently five do not deduct for presbycusis. Of the four that do consider presbycusis the approach varies in the amount and the age limit. As such, there is no fair way to determine the rate of presbycusis that may or may not exist in an audiogram. Further, including a 5 year time limit for audiograms after leaving the noisy workplace should reduce the impact of presbycusis on NIHL claims.
Issue regarding threshold of exposure for steady-state or impact noise

#21: Employers recommend that the policy include minimum duration of exposure for steady state noise and intermittent noise exposure to determine compensability.

Analysis and Response:

Hazardous noise levels are set by the Occupational Health and Safety Division under the Department of Labour and Advanced Education. They appear in Policy 1.2.6R – Workplace Noise Levels. In determining occupational exposure to noise levels in excess of acceptable noise exposure levels, the policy directs users to policy 1.2.6R for appropriate direction/guidance.
Appendix A

Noise Induced Hearing Loss: Stage Two Consultation Summary

Introduction

The WCB received four submissions of feedback regarding the Program Policy Background Paper: Occupational Noise Induced Hearing Loss.

Overview of Stakeholder Submissions

Outlined below is a summary of general comments submitted by stakeholders.

Injured Worker Organizations

- Recommend NIHL be classified as a workplace injury rather than an occupational disease.
- Recommend that decrease in number of eligible claims due to raised db level for PMIs be accompanied with a reduction in protection of employers from lawsuits.
- Recommend that medical professionals determine necessity of hearing aids to allow those with <105 db hearing loss to access medical aid and to enhance worker safety.
- Recommend that the time limit for audiograms be removed.

Labour Organizations

- Agree policy shouldn’t cover apportionment.
- Recommend a 5 year time limit for a worker to be assessed for NIHL after s/he has received medical evidence, not 5 years from the date of leaving the noisy work environment.
- Agree presbycusis reduction should be removed.
- Agree in maintaining the frequencies measured for an audiogram.
- Agree that the definition of Tinnitus be changed.
- Recommend employer be obligated to assist workers in meeting criteria for NIHL assessment through a hearing conservation program.
- Recommend hearing aids be dispensed without a PMI, on the recommendation of an audiologist or physician.
- Recommend clarification of ACOEM’s use of “typically” when describing asymmetry between hearing loss levels in each ear.
- Recommend clarification on types of screening audiograms that will be accepted.

Office of the Employer Advisor

- Recommend aligning WCB consultations with provincial government consultations.
- Recommend timing consultations in fall/ winter.
- Recommend changing NIHL definition.
- Recommend adding definition for ‘sensorineural hearing loss’.
- Recommend removing definition for ‘traumatic hearing loss’ or accompanying that definition with a definition for ‘conductive hearing loss’.
- Recommend claims only considered if worker was exposed to noise under an employer who has registered with the WCB.
• Recommend to calculate the out of province noise exposure and apportion the award accordingly.
• Recommend incorporating exposure criteria re: permissible steady state noise and impact noise.
• Recommend adjudication criteria to make a causation determining if there was engineering and administrative controls and/or hearing protection hazard control.
• Recommend an alternate cause adjudication provision.
• Recommend thresholds for duration of exposure.
• Agree NIHL should remain classified as an occupational disease.
• Recommend the inclusion of a prebycusis reduction.
• Recommend audiogram equipment calibration, compliance with testing booth standards, and qualifications of tester be included in policy.
• Recommend “excessive workplace noise” be clarified.
• Recommend evidentiary limitation period be reduced to 6 months.
• Recommend worker required to get audiogram after leaving a job permanently or temporarily or when the job no longer requires exposure to hazardous noise.
• Recommend that date of audiogram be considered the date of accident.
• Recommend the policy state the audiogram provided for a claim demonstrate measurement at all relevant frequencies.
• Recommend that presbycusis reduction be included in the policy.
• Recommend references to tinnitus be removed from the policy.

Employer Organizations
• Recommend consultations be conducted in the fall.
• Recommend that WCB delay policy until OHS Regulations are enacted and/or that the WCB extend consultation until OHS consultation.
• Recommend explicit duration (of exposure to noise for steady state noise and intermittent noise) to establish compensability of NIHL as an occupational disease.
• Recommend presbycusis be included in the policy.
• Recommend clarity around tinnitus and hearing loss awards.
• Recommend communication to workers around deadline for audiogram.
• Recommend clarity when hearing loss is asymmetrical.
POLICY

Effective Date: January 1, 2015

Date Issued: November 25, 2014

Date Approved by Board of Directors: October 31, 2014

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.

Sensorineural

Sensorineural hearing loss is due to damage to the cochlea of the cochlear nerve or the auditory pathways in the brain.

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 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 preventative 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 particular 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 in excess of permissible levels outlined in Policy 1.2.6R. Where actual noise levels are unavailable the Workers’ Compensation Board (WCB) 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 NIHL because their hearing loss is not occupational.

**Step 2:** After it has been determined that a worker was exposed to noise in excess of permissible levels, the worker must provide audiogram evidence that shows a pattern consistent with NIHL, as per the current ACOEM Guidance Statement. In determining a pattern consistent with NIHL, the WCB uses the ACOEM Guidance Statement¹ 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.

The audiogram frequencies of 250-8000 Hz shall be assessed, evaluated, and rated to determine if the hearing loss pattern is consistent with NIHL as noted above.

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.

To consider entitlement for NIHL, once a worker is no longer exposed to workplace noise in excess of permissible levels, the worker must have an audiogram performed within 5 years of leaving the workplace location with the excessive noise. The date of the audiogram indicating NIHL will be considered the date of accident for adjudication purposes.

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

3. 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 NIHL.

¹ Occupational Noise-Induced Hearing Loss. 2012
4. The existence and degree of a worker’s permanent medical impairment rating for NIHL will be determined using the American Medical Association’s “Guides to the Evaluation of Permanent Impairment—Fourth Edition” (the “AMA Guides”).

Tinnitus

5. To establish entitlement to a permanent impairment rating for tinnitus caused by NIHL, the following circumstances must apply:
   5.1 There is an acceptable claim for occupational NIHL; and
   5.2 There is a clear and adequate medically documented history of two or more years of continuous tinnitus.

6. Claims for tinnitus caused by occupational factors other than NIHL will be adjudicated as per Policy 1.3.7—General Entitlement—Arising out of and in the Course of Employment.

7. To determine an impairment rating for tinnitus, the WCB shall use the AMA Guides.

APPLICATION

This Policy applies to decisions made on or after January 1, 2015.
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.

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Executive Corporate Secretary