

**NOISE INDUCED HEARING LOSS SYMPOSIUM**  
**DATE: 25 APRIL 2024**  
**CONSOLIDATED QUESTIONS AND ANSWERS PACK**



<b>COMPENSATION STATISTICS (Dr Dzingwa)</b>	
<b>QUESTION</b>	<b>ANSWER</b>
Which occupation had the highest compensable claim, since 2003?	Please refer to the presentation which highlights the Top 10 impacted occupations over the past 20 years.
What is the top reason for claims getting rejected?	Claim not meeting the COID requirements
If there is a relationship between age and development of NIHL, how does RMA differentiate between occupational causes and Age-related causes?	The relationship can be independent and synergetic. Current compensation model does not consider age correction. It means a claim is adjudicated purely on PLH or PLH shift.
If OAE is advisable a better indicator, what would be the plan in implementation to industry, seeing the requirements of education to both perform and interpret OAE results?	OAE can be added to audiometric test battery for early inner pathology detection. Training and education can incorporate in Hearing Conversation Programs
Of the Top 5 compensation claims, what are the other 4? Excluding the NIHL?	Heat exhaustion, heat cramps, synovitis and tenosynovitis and carpal tunnel syndrome
Are your stats based on total NIHL or can you break it down between Occupational NIHL and Medical NIHL? We have found that more than 90% of our NIHL cases is due to medical conditions (diagnosed with specialists and tests)	The stats were based on submitted NIHL claims
What are the common reasons for 9%rejection of claims for NIHL?	<ul style="list-style-type: none"> <li>• Claim not meeting the COID requirements</li> <li>• Hearing loss not Sensory Neural Hearing Loss (SNHL)</li> </ul>

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	<ul style="list-style-type: none"> <li>• SNHL other than noise</li> <li>• Sudden or Acute PHL deterioration</li> </ul>
Does RMA use ABR or ASSR and OAEs to give a picture of NIHL?	Pure Tone Audiometry is a gold standard audiometry for determining the type of HL and degree of PHL or PLH shift as per COID NIHL instruction. Baseline and periodic screening audiograms are currently used to get a picture of NIHL claim. ABR and ASSR due to their limitations are used in exceptional cases for additional insight. RMA does not receive OAE data at the moment. OAE data is limited inner ear pathology not the type and extent of HL
<b>NOISE RESEARCH: OUTCOMES AND WAY FORWARD (DR N Tlotleng)</b>	
<b>QUESTION</b>	<b>ANSWER</b>
What can one do to be part of the research team, related to the effects of COVID-19 and NIHL?	At the moment there is no research done at the MHSC on effect of COVID-19 and NIHL. The research was proposed however designing the study may be a challenge. Should there be reliable data source of NIHL patients and their record of being diagnosed with COVID-19, an approach of a retrospective cohort study design can be taken to assess causality/ association.
On the research of Ototoxic effects of ARV's, findings that there is no correlation was based on one study, shouldn't there be more studies conducted to verify the findings, or has this been done?	There were limitations in the study that the researchers highlighted which may be reasons for lack of association observed, contracting

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	<p>what literature. One example is the small sample size as well as loss to follow up of participants included in the study.</p> <p>However, the researchers did propose that more studies with a larger sample size can be done to look at the relationship between HIV positive, being on ARV and hearing loss.</p>
<p>Given that most mines reported an increase in OHNIL post the COVID 19 lockdown, could the increase be associated with COVID 19? I think is an area for exploration.</p>	<p>It may be the effect of the SARS virus on the hearing, as previously alluded to with HIV or the COVID-19 medication (s). We may not know this unless research is done. Careful consideration should however be taken when designing this particular study.</p>
<b>NOISE RISK EXPOSURE ANALYSIS (V Nundlall)</b>	
<b>QUESTION</b>	<b>ANSWER</b>
<p>When are the rock drills sent for maintenance, at failure or on a schedule?</p>	<p>Rock drills are sent for maintenance at failure or when attenuation fails (as identified by ventilation / occupational hygiene during routine measurements). We are however aspiring towards the implementation of maintenance schedules.</p>
<b>OTOTOXIC CHEMICALS AND HEARING LOSS (N LETSOALO)</b>	
<b>QUESTION</b>	<b>ANSWER</b>
<p>How does one differentiate between ONHIL and Ototoxicity, especially if Ototoxicity is non occupational.</p>	<p>The main determiner for the diagnosis will be the medical case history information, conduct all test including extended frequencies from 8-16kHz. Look at the pattern of ONIHL which was described by</p>

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	Dr Dzingwa as it is different pattern from other types of sensory neural hearing loss.
<p>Could a sign of Ototoxicity be that the persons hearing is fine (better than most), but have symptoms of struggling to hear with background noise or experience people mumbling?</p>	<p>The initial stages of ototoxicity could be symptomatic including symptoms like tinnitus, mild communication disturbances during conversations in noise, balance problems, vertigo etc. These are all signs that further tests and monitoring should be done if the patient has been on any ototoxic medication you will pick up the changes over time.</p>
<p>Are we being realistic when we continue calling it NIHL, when all these other background effects...i.e. medication, food, chemicals, drugs... which is more of where we find ourselves exposed to at some point in our lives, might also result in hearing loss?</p>	<p>Yes, there are specific patterns that we see in ONIHL, and specific patterns for ototoxicity. The other important factor in diagnosis of both, include all the series of tests to rule out and differentiate one from the other. Don't forget to take a thorough medical case history which will indicate to you presence of medication, noise exposure etc.</p>
<p>What is the role of antioxidants on NIHL?</p>	<p>Some studies have been done on animal models and some evidence does exist that support use of antioxidants to improve or support hearing health.</p> <p><a href="#">Antioxidant Therapy as an Effective Strategy against Noise-Induced Hearing Loss: From Experimental Models to Clinic - PMC (nih.gov)</a></p>

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<b>OAE AND STS IN NOISE RISK MANAGEMENT (DR L NTLHAKANA)</b>	
<b>QUESTION</b>	<b>ANSWER</b>
Since there is a drive to include OAE in screening, would you recommend that the OHN and audiometrist extend their competency to this method or is it going to be exclusive to audiologists...What is the economic impact on the industry and country?	OAE screening could be explored as part of OHN competency in audiometry (not for the general audiometrist). DPOAE diagnostic component is only for audiologists as it is part of the diagnostic audio protocol. This is a tool and a procedure that will reduce the economic burden of the industry and country (NIHL compensation payouts) and the hearing health burden for the workers (ONIHL disability).
Please highlight for the audience why 16 hours noise free is not a suggestion but the impact on quality of screen?	16 hours noise-free is part of the quality check and compliance in audiometry screening and should not be overlooked.
<b>RECENT ADVANCES IN HEARING CONVERSATION PROGRAMMES (PROF N MOROE)</b>	
<b>QUESTION</b>	<b>ANSWER</b>
What is the price range of the special HPD and smart protection you referred to in your presentation?	The items I have were acquired for research purposes, and I do not have an exact cost for them. I approached a local company recommended for sourcing the product; however, they provided a quote for a different product that did not meet the specifications I mentioned in my presentation. I will verify the cost with the company from which I originally sourced the products.

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<p>On the new technology: The worker goes underground with the technology, meaning that they should fit it before going underground, can they then remove their hearing protection during shift?</p> <p>In some mines you only put hearing protection when in a noisy environment, and with regards to underground mines, it's advisable not to have HPDs in your ears during cage transit as the pressure change might damage your ears.</p>	<p>Workers can remove the device during their shift if they are not exposed to noise levels exceeding permissible limits. This device is a standard earplug/headphone device that can be removed as needed. The key feature is the built-in dosimeter, which measures the noise levels the person was exposed to and the level of protection provided by wearing the device. Additionally, the dosimeter records instances when the earplug was removed and displays the noise levels at that time. This way, you can judge if the noise levels were not high when the device was removed.</p> <p>That shouldn't pose an issue. The main focus is on the noisy environment and ensuring that workers consistently use hearing protection when needed. When they are not in a noisy environment, there is no need to wear the protection, as long as they remember to put it on when exposed to noise.</p>
<p>Can smart hearing be retrofitted?</p>	<p>It depends. One option is to have workers use their standard hearing protection devices while pairing them with a dosimeter attached to the hard hat to measure the noise entering the ear. Alternatively, you can opt for an in-ear dosimeter that is built into the</p>

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	device itself. This requires getting a new device that comes installed with the dosimeter already.
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