Update from the UK deafness and asbestos working parties
Robert Brooks, Philip Jacob, Darren Goldthorpe and John Wilson

Agenda

• Deafness: Update on recent experience
• Deafness: The future - new loss quantification guidelines
• Asbestos: Survey 2015 vs. 2009 market estimate
• Asbestos: Mesothelioma deaths
• Asbestos: Key points and this year’s work
Update from the UK deafness working party
Recent claims experience – Philip Jacob

Recent experience – monthly notifications
Update from the UK deafness working party
Impact of the Quantification Guidelines on NIHL Claims – Darren Goldthorpe

Assessing Disability – the present

• The DHSS method of assessing disability is used:

  • Hearing averaged at 1-3 kHz in each ear.
  • Better ear weighted to reflect that it will ‘assist’ the worse hearing ear and compared with expected age related loss
Assessing Disability – the present

- The DHSS method of assessing disability is used:

- Hearing averaged at 1-3 kHz in each ear.
- In claims the loss is compared with age related loss and a reduction made.

Assessing Disability – the present

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Right</th>
<th>Left</th>
</tr>
</thead>
<tbody>
<tr>
<td>1kHz</td>
<td>15 dB</td>
<td>20 dB</td>
</tr>
<tr>
<td>2kHz</td>
<td>20 dB</td>
<td>20 dB</td>
</tr>
<tr>
<td>3kHz</td>
<td>16 dB</td>
<td>10 dB</td>
</tr>
<tr>
<td>Avg.</td>
<td>16.67 dB</td>
<td>20.00 dB</td>
</tr>
</tbody>
</table>

**NIHL**

AAHL determined by using the superior percentile as 75th percentile and age rounded to closed match for data set as 60

- OBHL
  \[ \text{OBHL} = \frac{(4 \times \text{Average in Better Ear} + \text{Average in Worse Ear})}{5} \]
  \[ = \frac{(4 \times 15.67 \text{ dB}) + (20.00 \text{ dB})}{5} \]
  \[ = 17 \text{ dB} \]
- AAHL determined as 9 dB
- NIHL = 17 dB - 9 dB
  \[ = 8 \text{ dB} \]
Assessing Disability – the problems

• Very arbitrary method and ignores the impact of other conditions, it assumes all damage left after deduction for age is noise related.

Assessing Disability – the future

• The Lutman, Coles and Buffin Guidelines (the quantification guidelines) were formally published in February 2016 but have been available online since October.


• They make calculation of loss entirely dependent upon the level of loss seen at 4 kHz.

• No damage at 4 kHz is going to make a significant overall loss unlikely.

• Most people agree that it will lower level of loss.
Assessing Disability – the future

- Introduces a new comparison line for calculations

<table>
<thead>
<tr>
<th>Pass 2 - Right Ear</th>
<th>Frequencies (kHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.125</td>
</tr>
<tr>
<td>A HTL</td>
<td>20</td>
</tr>
<tr>
<td>B HTL Anchor</td>
<td></td>
</tr>
<tr>
<td>C AAHL</td>
<td>6</td>
</tr>
<tr>
<td>D Misfit values at anchor points</td>
<td>11</td>
</tr>
<tr>
<td>E Interpolated misfit values</td>
<td>4</td>
</tr>
<tr>
<td>F Adjusted AAHL</td>
<td>15</td>
</tr>
<tr>
<td>G Audiometric Budge</td>
<td>8</td>
</tr>
</tbody>
</table>

- The large gaps seen under the DHSS method will always reduce.

Assessing Disability – the future

- In theory this should reduce disability, particularly where there is an excess loss unlikely to arise as a result of noise damage
Assessing Disability – the future

• But there will be cases where the loss increases under the new method.

Assessing Disability – the future

• There are also gaps in the paper.

• Although it gives guidance on how to calculate loss on one ear it is completely silent as to how a binaural calculation will be made.

• Professor Lutman has indicated that better ear weighting should remain but has yet to commit to a methodology.

• This is a significant defect and will lead to uncertainty.

• There are already various arguments springing up, particularly surrounding how the ‘better’ ear is determined.
Assessing Disability – the future

- Which is the better ear – an extreme example:
  - Right Better: 0dB loss
  - Left Better: 7dB Loss

- How any software determines ‘better ear’ will have a big impact.

Assessing Disability – the future

- BC Legal have identified eight different methods of calculating binaural disability – until a definitive method is selected market wide analysis isn’t possible with any degree of certainty.
- Desktop Claims Supervisor application allows for analysis of resulting loss across all of these methods.
- Will there be a flurry of De Minimis arguments?
- Bear in mind that a claim cannot be De Minimis if there is a diagnosis of Noise Induced Tinnitus.
Assessing Disability – the future

• Expect further debate on late onset tinnitus.

The possibility that the onset of noise-induced tinnitus might be delayed by months has been raised because studies in laboratory animals have shown that degenerative processes initiated by the noise exposure continue in central auditory pathways after termination of the exposure (Kim et al., 1997; Morest et al., 1998). Although degenerative changes in afferent pathways will most likely not affect auditory thresholds, it is possible that they could contribute to other central processes such as tinnitus. The time required for this reorganization might vary across individuals and potentially could be a long-term process. However, as the interval between a noise exposure and the onset of tinnitus lengthens, the possibility that tinnitus will be triggered by other factors increases. A more complete understanding of the mechanisms by which tinnitus is generated will be needed before the existence of delayed onset of noise-induced tinnitus can be confirmed or rejected.
Assessing Disability – the future

• We have seen previous evidence of coaching:

  Just tell the solicitor 18 months, or he will not take your case on.

  Just tell the solicitor you have ringing in your ears, or he will not take your case on.

Assessing Disability – the future

• Assuming 3dB or less to qualify as De Minimis:
  – Increase from 24 DHSS claims to 51 on Full Method
  – Increase from 54 to 136 if tinnitus issues can be addressed
  – Requires better ear determined at start of process.
Assessing Disability – the future

- Assuming 3dB or less to qualify as De Minimis:
  - Increase from 24 DHSS claims to 42 on Full Method (-9)
  - Increase from 54 to 114 if tinnitus issues can be addressed (-22)
  - Better ear determined at end of process.

- Assuming 5dB or less to qualify as De Minimis
  - Reduction from 238 (165+73) to 193 (134+59).
Assessing Disability – the future

- Choosing the right case to argue De Minimis using the LCB guidance is essential:
  - We do not want a case with accompanying tinnitus to start with
  - We do not want a case with large losses at 4 kHz
  - Ideal case

- Loss is only 3.93db but big loss at 4 kHz allows more argument.
Assessing Disability – the future

- There needs to be a thorough analysis of the cases, rushing off just because a software package says 2 dB loss on the final output without further thought could undermine the paper.
- A lot of Defendant’s are running De Minimis arguments badly.
Assessing Disability – the future

- Expect new methods to be suggested

**************screenshot from symposium – all frequency method*****
Assessing Disability – the future

• Experts largely instructed by Claimant’s have already prepared papers seeking to discredit guidelines:

### Is it reasonable to use 1 and 8 kHz anchor points in the medico-legal diagnosis and estimation of noise-induced hearing loss?

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**Background**: In the United Kingdom, use of 1 and 8 kHz anchor point frequencies has been recommended for the medico-legal diagnosis and estimation of noise-induced hearing loss. There appear to be four assumptions behind

**Objective of review**: Is it reasonable to use 1 and 8 kHz anchor points in the medico-legal diagnosis and estimation of noise-induced hearing loss?

**Type of review**: Medico-legal

### Assessing Disability – the future

• Expect damages inflation from more serious attempts at claiming hearing aids.
Update from the UK asbestos working party
Survey 2015 vs. 2009 market estimate

Survey 2015 vs. 2009 market estimate
*Insurance costs 2009 to 2014 (£m)*

- 2009-2014 Projected (Scenario 23 & Scenario 2B)
- 2009-2014 Actual - Implied Settled (Notified No. claims x Settled average)
- 2009-2014 Actual - Incurred (Notified No. claims x Incurred average)

Assuming the 2015 survey covers 80% of the insurance market
Survey 2015 vs. 2009 market estimate

*Assuming the 2015 survey covers 80% of the insurance market*
Update from the UK asbestos working party
Mesothelioma deaths

Mesothelioma deaths

*Age-cohort model - Nielsen et al (2013)*

- No constructing exposure measures and no projecting of future populations.
- Inspired by the chain ladder methodology.
- Basically an age-period-cohort model using a GLM in R to fit parameters.
- Similar forecasts produced for age–cohort model and the age–period–cohort model, so used age–cohort model.
- Simplifications taken: Discards cohorts younger than 1966, no future cohorts and only projecting ages 35–89.
- Provides a simple benchmark method, checking the robustness of other more sophisticated methods.
Mesothelioma deaths
Actual experience up to 2013 and all recent projections

GB male mesothelioma deaths (ages 20-89)

- Actual
- HSE Non-closure (2015)
- Nielsen et al - AC (2015)*
- AWP (2009) Adjusted HSE

* A simple benchmark for mesothelioma projection for Britain - Jens Nielsen et al - September 2015

Mesothelioma deaths
Actual experience up to 2013 and rescaled projections

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Mesothelioma deaths

Distribution of actual age by year of death

Mesothelioma deaths

Average age: HSE (2015)* vs. experience

* AWP recreation of HSE central estimate less than 0.3% difference
Update from the UK asbestos working party
Key points and plan for next year

Key points and this year’s work

Key points

• After 5 years our market estimates are reasonably in line at the total level.

• However we are beginning to see deviations from our assumptions.
  – The propensity for mesothelioma sufferers to make a claim.
  – Age of mesothelioma claimants.

• GB male mesothelioma deaths still to peak
  – Key questions still: When will deaths peak? How will they run off from the peak?
  – HSE recalibrated their “non-clearance” model. The peak is one year later (in 2016) and 1% higher (at 2,008 deaths) than their 2013 projection.
  – AWP models based on deaths up to 2008.
Key points and this year’s work

What is the AWP doing?

• Investigating initial findings and potentially a new insurance market estimate for GIRO 2016.
  – Focus on the estimation of mesothelioma deaths and propensity for mesothelioma sufferers to make a claim.
  – Looking at recreating the Nielsen et al and HSE 2015 models.
• Continue to collect market data to support a new market estimate.
  – Announced via the GI newsletter and on the IFoA website.
  – Deadline is 22nd April.

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.