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Update from the UK deafness and asbestos working parties

Robert Brooks, Philip Jacob, Darren Goldthorpe and John Wilson

07 April 2016

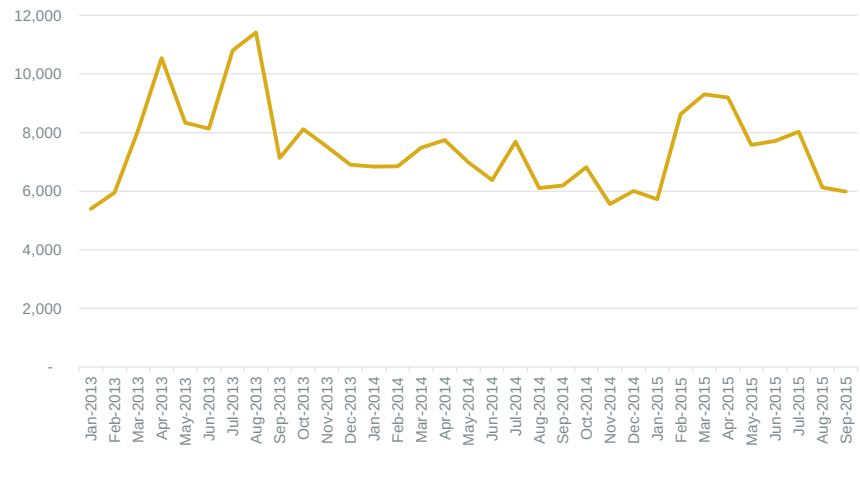
Agenda

- 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:

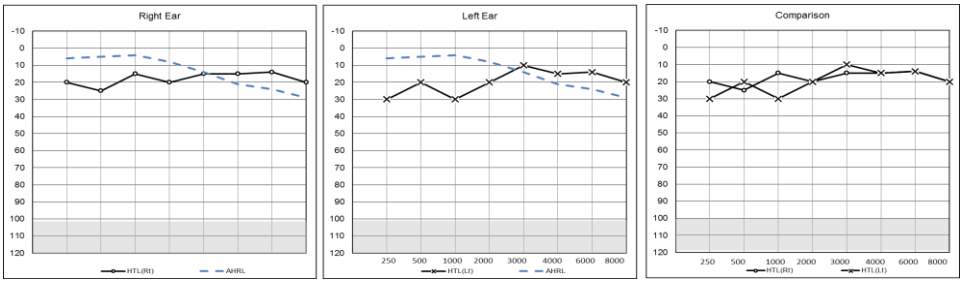
Department for Work and Pensions

46. An authoritative detailed discussion of the quantitative assessment of hearing loss for compensation which included an historical overview was published in 1992 (12). This confirmed that different approaches have been proposed at different places and times over the last 60 years with as yet no consensus reached. It concluded that, for medico-legal purposes, pure tone audiometry remained the most appropriate method for supporting a diagnosis of sensorineural noise-induced hearing loss ie from the overall pattern of the tracing including the characteristic notch or bulge at 3, 4 or 6 kHz, and that assessment of hearing disability should be by measuring hearing threshold level in dBs averaged over 1, 2 and 3 kHz. This approach has been adopted in the UK courts.

- 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.

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Assessing Disability – the present

	Air	
Frequency	Right	Left
1kHz	15 dB	30 dB
2kHz	20 dB	20 dB
3kHz	15 dB	10 dB
Avg.	16.67 dB	20.00 dB

OBHL	17.00 dB
AAHL	8.67 dB
NIHL	8.33 dB

Hide calculation steps

NIHL

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

- OBHL
  = ((4 x Average in Better Ear) + (Average in Worse Ear)) / 5
  = (4 x 16.67 dB) + (20.00 dB) / 5
  = **17 dB**
- AAHL determined as **9 dB**
- NIHL = 17 dB - 9 dB
  = **8 dB**

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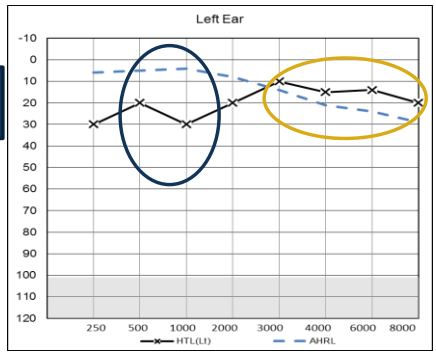
Assessing Disability – the problems

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

Abnormal Hearing attributed to noise



Normal Hearing Ignored

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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.

http://onlinelibrary.wiley.com/doi/10.1111/coa.12569/abstract

- 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.

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Assessing Disability – the future

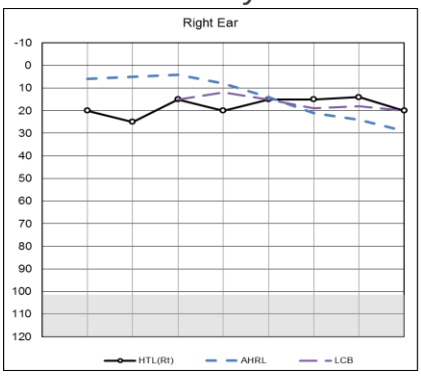
- Introduces a new comparison line for calculations

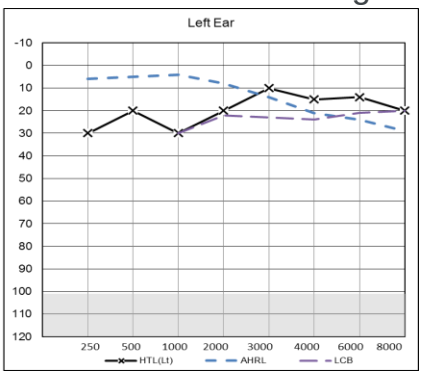
		Frequencies (kHz)							
Pass 2 -Right Ear		0.25	0.5	1	2	3	4	6	8
A	HTL	20	25	15	20	15	15	14	20
B	HTL Anchor			15					20
C	AAHL	6	5	4	8	14	21	24	29
D	Misfit values at anchor points			11					-9
E	Interpolated misfit values				4	1	-2	-6	
F	Adjusted AAHL			15	12	15	19	18	20
G	Audiometric Bulge			0	8	0	-4	-4	0

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

Assessing Disability – the future

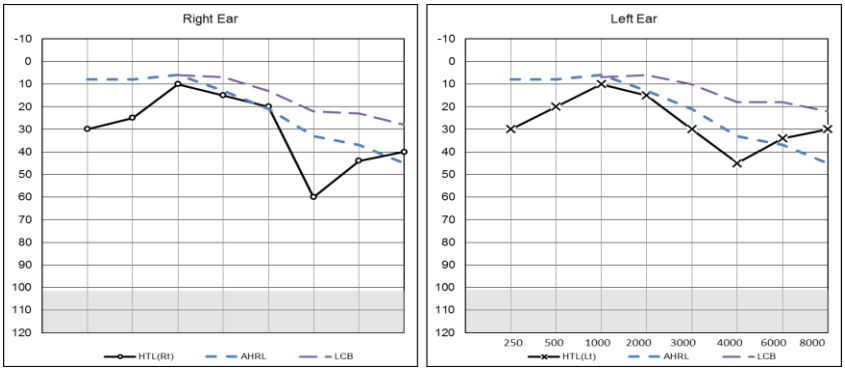
- In theory this should reduce disability, particularly where there is an excess loss unlikely to arise as a result of noise damage





Assessing Disability – the future

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



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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.

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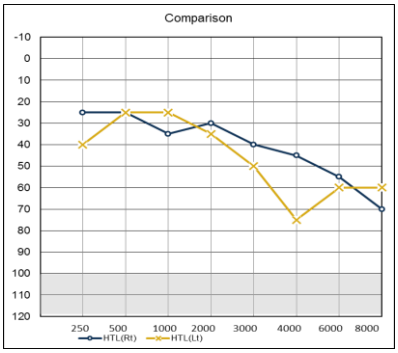
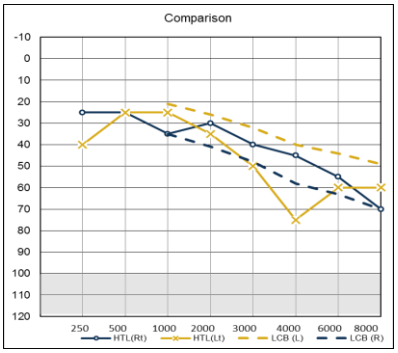
Assessing Disability – the future

- 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.

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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.

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Assessing Disability – the future

- Expect further debate on late onset tinnitus.

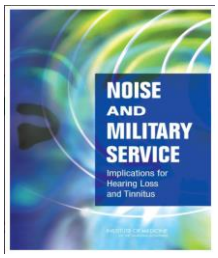
5. TINNITUS

110. Tinnitus is a common symptom in the adult population occurring at some time in about 30% of adults and increasing in prevalence with age. Noise is a common cause of tinnitus, but it can result from other causes. Tinnitus which starts more than a year after exposure to noise has ceased is unlikely to be due to noise. Tinnitus is subjective, and cannot yet be objectively measured; it may be intermittent or improve over time. (30). Recent evidence suggests that tinnitus has little effect on the ability to hear in everyday life (31, 32). [If hearing threshold is plotted against speech audiometry the scatter is the same in the presence or absence of tinnitus.]

Department for Work and Pensions Cm 5672

Assessing Disability – the future

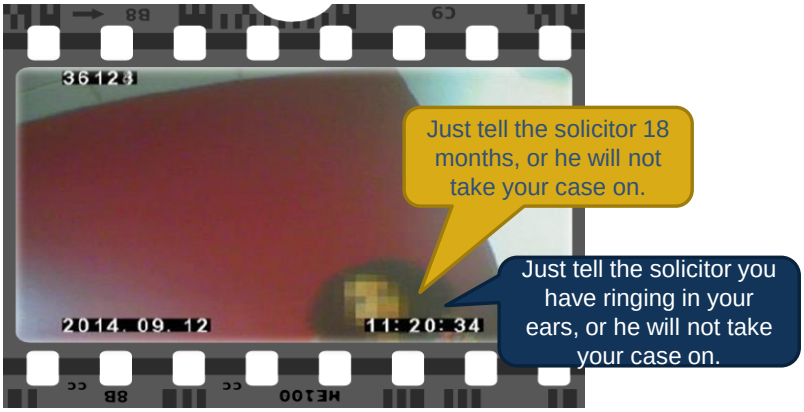
- Expect further debate on late onset tinnitus.



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.

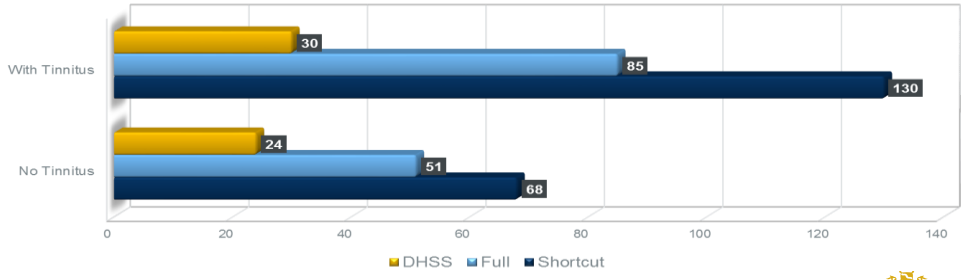
Assessing Disability – the future

- We have seen previous evidence of coaching:



Assessing Disability – the future

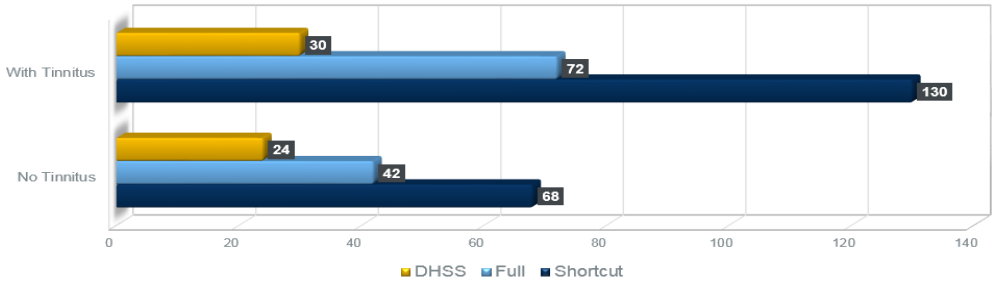
- Assuming 3dB or less to qualify as De Minimis:
  - Increase from 24 DHSS claims to 51 on Full Method
  - Increase from 54 to 136 if tinnitus issues can be addressed



  - Requires better ear determined at start of process.

Assessing Disability – the future

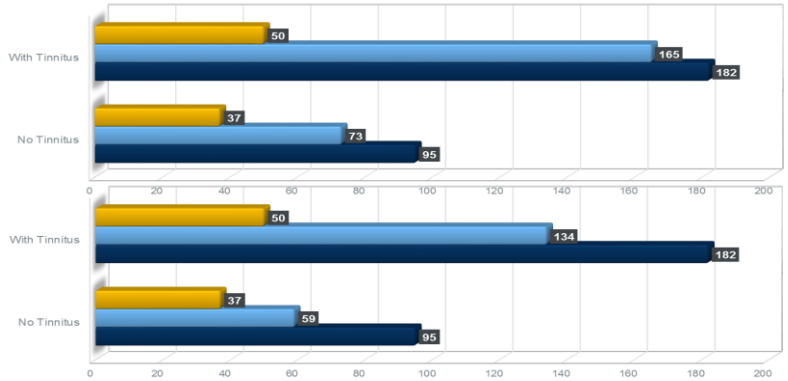
- Assuming 3dB or less to qualify as De Minimis:
  - Increase from 24 DHSS claims to 42 on Full Method (-9)
  - Increase from 54 to 114 if tinnitus issues can be addressed (-22)



  - Better ear determined at end of process.

Assessing Disability – the future

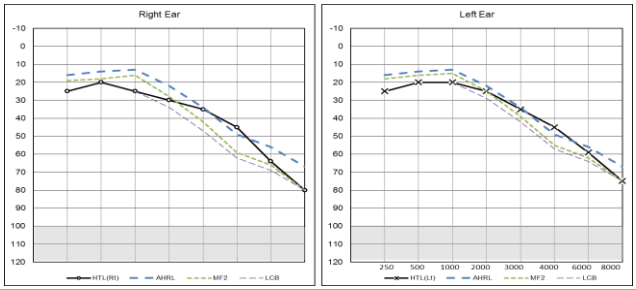
- Assuming 5dB or less to qualify as De Minimis



- 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



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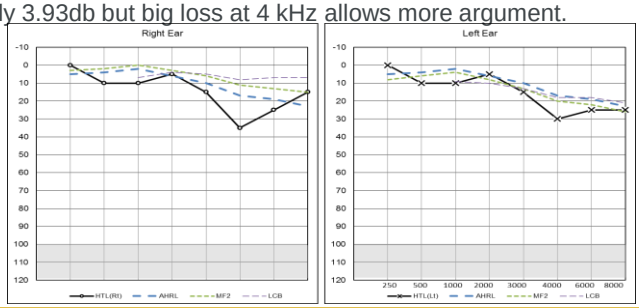
Assessing Disability – the future

- 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
  - Loss is only 3.93db but big loss at 4 kHz allows more argument.



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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.

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Assessing Disability – the future

	Hughes v Rhondda Cynon Taff CBC (August 2012)	*Holloway v Tyne Thames Tech Ltd* (7 May 2015)	*Hinchliffe v Cadbury UK Ltd* (12 May 2015)	*Lomas v London Electric Wire Company & Smiths Ltd* (22 June 2015)	*Briggs v RHM Frozen Food Limited* (July 2015)	*Roberts v Prysmian Cables and Systems Limited* (Wrexham CC, 30 October 2015)	*Childs v Brass & Alloy Pressings (Deritend) Ltd* (Birmingham CC, 21 December 2015)
THE NIHL	No disability within 1-3 kHz frequency range 5dB NIHL at 4kHz.	NIHL of up to 1.6 dB averaged between 1-3 kHz. 11dB NIHL at 4kHz in the right ear and 16 dB NIHL in the left	3dB NIHL averaged over 1-3 kHz. 10-15 dB loss at 4kHz.	3 dB NIHL averaged over 1-3 kHz bilaterally. No losses at 4 or 6kHz.	Little or no NIHL at 1-3kHz. Loss of up to 15dB at 4kHz.	Average of between 3-5dB NIHL over 1-3 kHz and *'some damage'* at 4 and 6 kHz.	2.02dB NIHL averaged over 1-3 kHz.
TINNITUS	NO	NO	NO	SLIGHT and noise induced	SLIGHT **not** noise induced	SLIGHT **not** noise related.	No
HEARING AIDS	No Hearing Aids	No Hearing Aids	Need accelerated by 2-5 years.	No Hearing Aids	Accelerated need for Hearing Aids	No Hearing Aids	Need accelerated by 5 years
CL SOL / COUNSEL	? / David Harris	Roberts Jackson Limited / Timothy Grace	Roberts Jackson Limited / Alistair Wright	Michael Lewin Solicitors / Joe Wynn	Roberts Jackson Limited / Mr Vanderpump	Slater & Gordon / Elizabeth Marshall	Roberts Jackson Limited / Mr Vanderpump
DF SOL / COUNSEL	Dolmans / Doug Cooper	Clyde & Co/ Doug Cooper	DAC Beachcroft /Doug Cooper	Weightmans/ Richard Seabrook	DWF/Miss Sutton	Clyde & Co / Paul Higgins	DAC Beachcroft / Mr Gregory
CLAIMANT EXPERT	Mr Tomkinson	Professor Homer	Mr Zeitoun	Mr Lloyd	Professor Homer	Mr Tomkinson	Mr Manjaly
DEFENDANT EXPERT	Mr Jones	Professor Lutman	Mr Jones	Professor Lutman	Mr Jones	No Expert	No Expert
DE MINIMIS?	YES	YES	NO	YES NIHL BUT DAMAGES AWARDED FOR TINNITUS	NO	NO	NO

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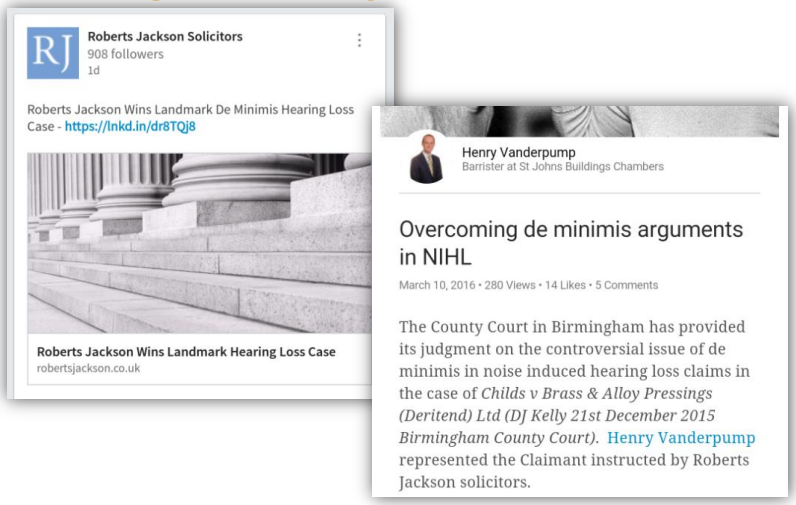
Assessing Disability – the future



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Assessing Disability – the future

- Expect new methods to be suggested
- **********screenshot from symposium – all frequency method*****

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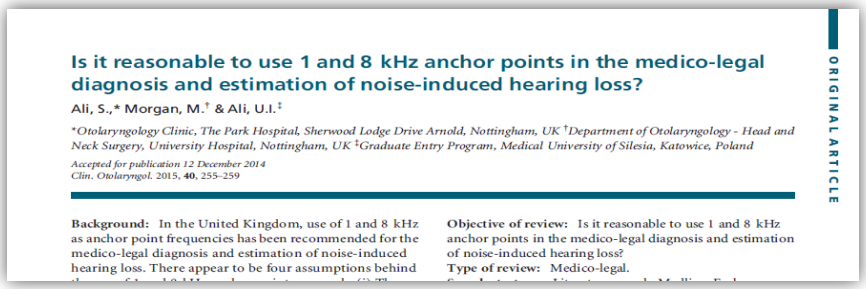
Assessing Disability – the future

- Experts largely instructed by Claimant's have already prepared papers seeking to discredit guidelines:



ORIGINAL ARTICLE

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

Ali, S.,* Morgan, M.† & Ali, U.I.‡

*Otolaryngology Clinic, The Park Hospital, Sherwood Lodge Drive Arnold, Nottingham, UK †Department of Otolaryngology - Head and Neck Surgery, University Hospital, Nottingham, UK ‡Graduate Entry Program, Medical University of Silesia, Katowice, Poland

Accepted for publication 12 December 2014
Clin. Otolaryngol. 2015, **40**, 255–259

Background: In the United Kingdom, use of 1 and 8 kHz as 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.

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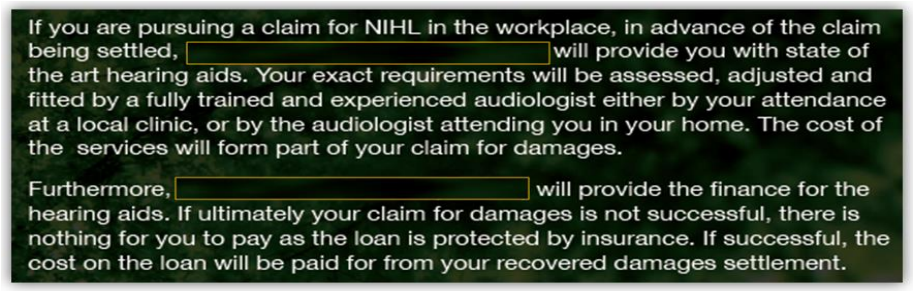
Assessing Disability – the future

- Expect damages inflation from more serious attempts at claiming hearing aids.



If you are pursuing a claim for NIHL in the workplace, in advance of the claim being settled, [redacted] will provide you with state of the art hearing aids. Your exact requirements will be assessed, adjusted and fitted by a fully trained and experienced audiologist either by your attendance at a local clinic, or by the audiologist attending you in your home. The cost of the services will form part of your claim for damages.

Furthermore, [redacted] will provide the finance for the hearing aids. If ultimately your claim for damages is not successful, there is nothing for you to pay as the loan is protected by insurance. If successful, the cost on the loan will be paid for from your recovered damages settlement.

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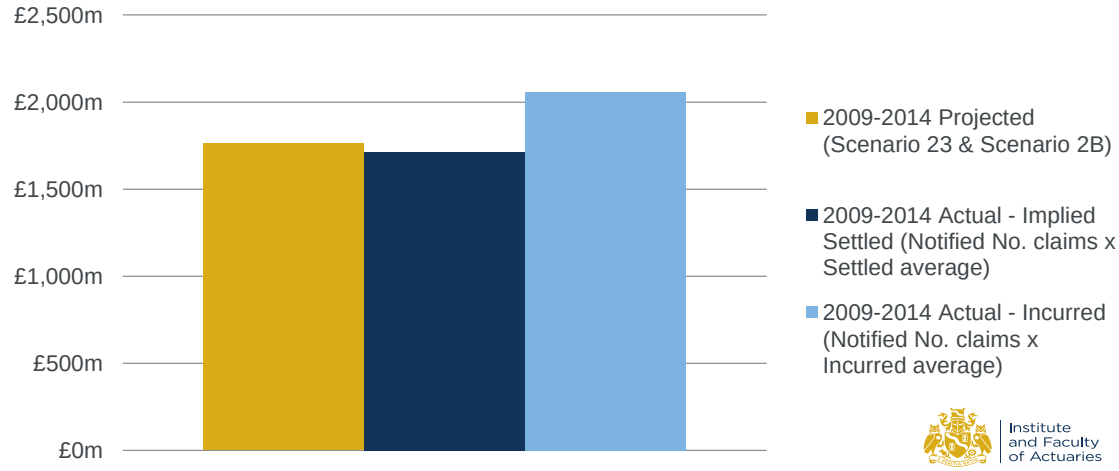
Update from the UK asbestos working party

Survey 2015 vs. 2009 market estimate

Survey 2015 vs. 2009 market estimate

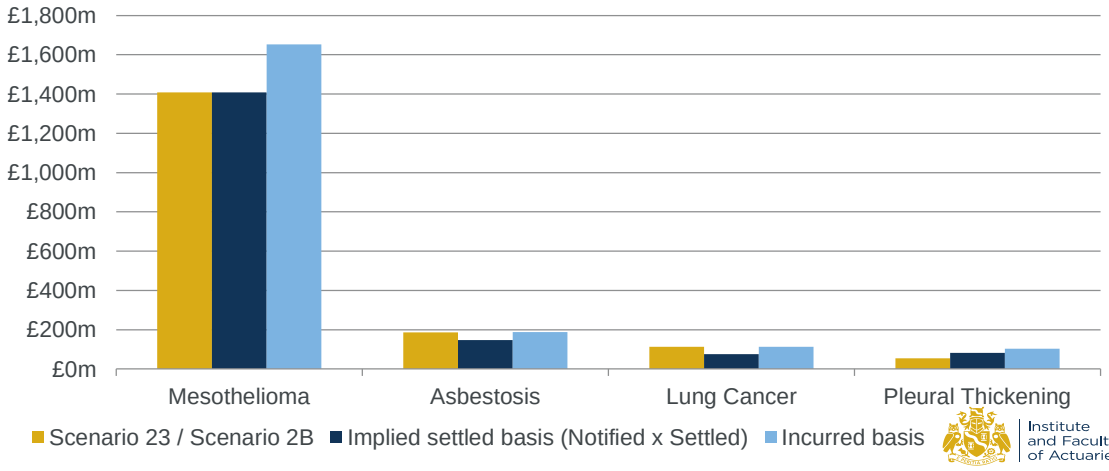
Insurance costs 2009 to 2014 (£m)



Assuming the 2015 survey covers 80% of the insurance market

Survey 2015 vs. 2009 market estimate

Insurance costs 2009 to 2014 (£m)

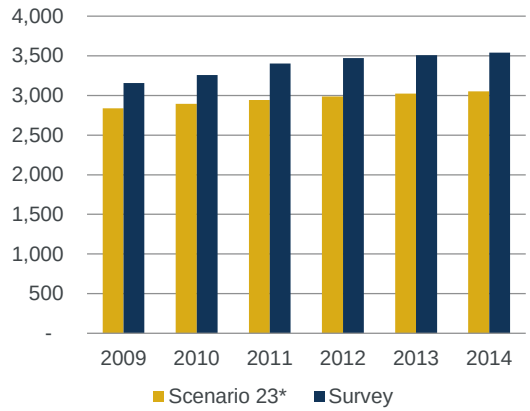


Assuming the 2015 survey covers 80% of the insurance market

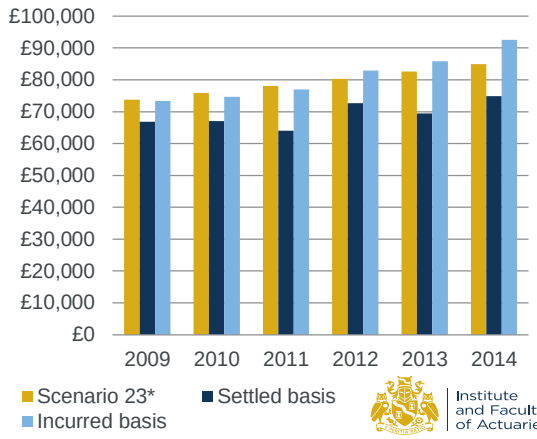
Survey 2015 vs. 2009 market estimate

Mesothelioma

Number of claims (includes nils)



Average Claim Size (£) (includes nils)



* Assuming 23% nil rate based on 5yr weighted average from Survey 2015

Update from the UK asbestos working party

Mesothelioma deaths

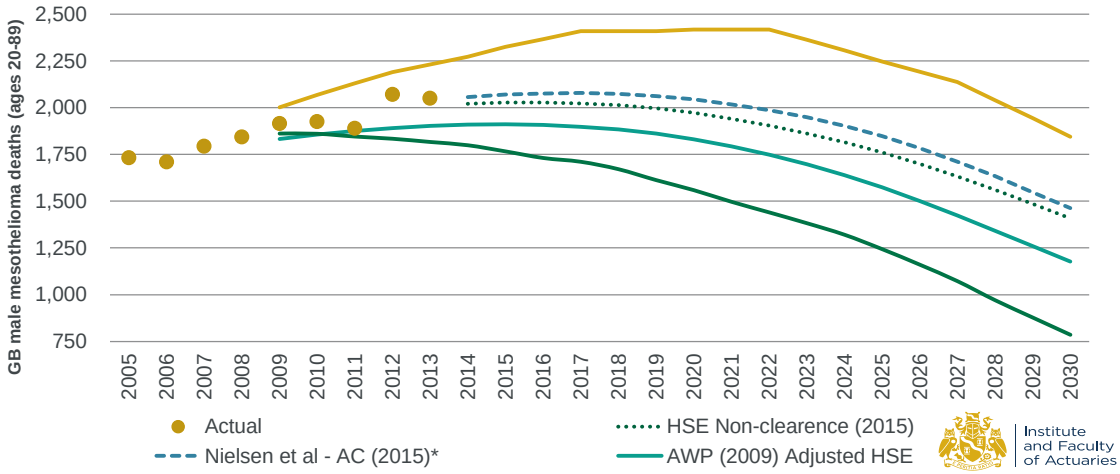
Mesothelioma deaths

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

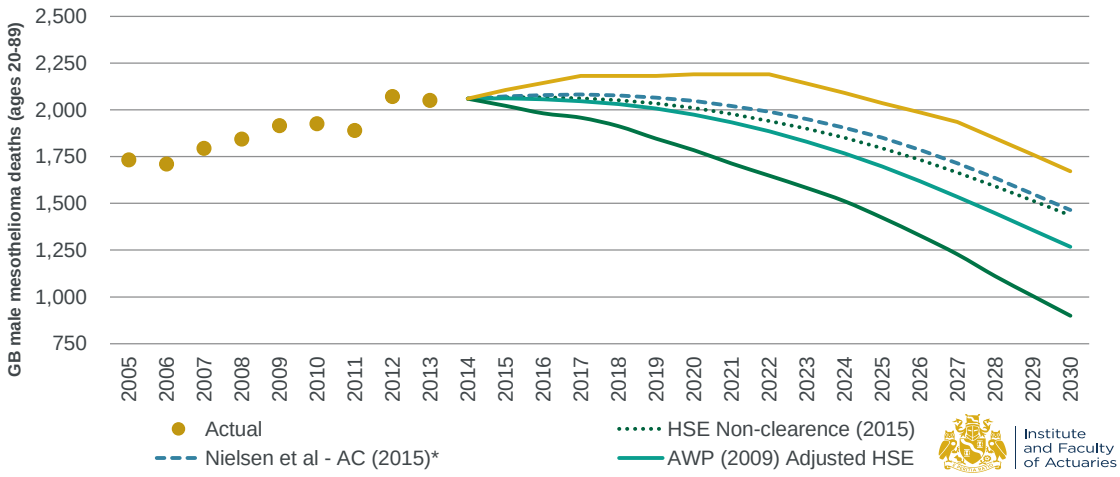
Actual experience up to 2013 and all recent projections



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

Mesothelioma deaths

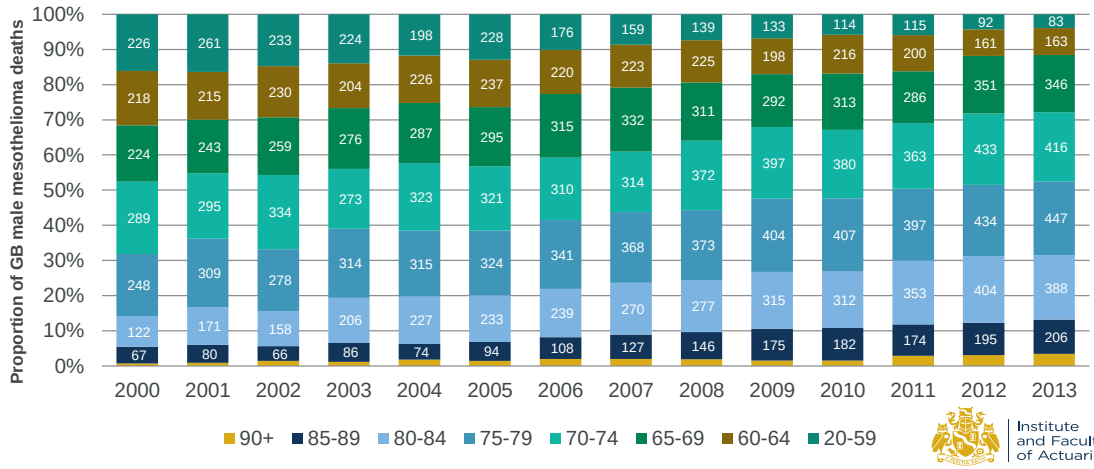
Actual experience up to 2013 and rescaled projections



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

Mesothelioma deaths

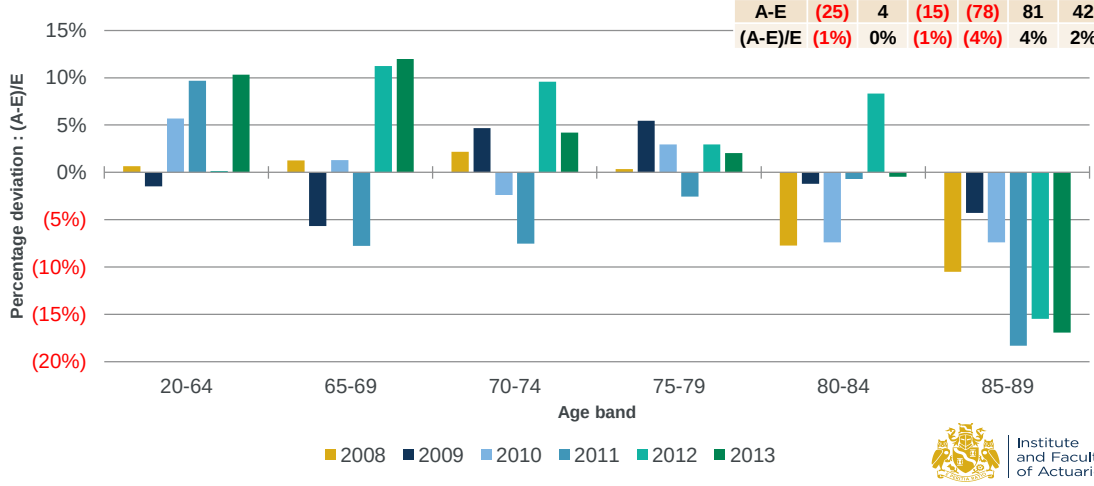
Distribution of actual age by year of death



Mesothelioma deaths

Average age: HSE (2015) vs. experience*

	2008	2009	2010	2011	2012	2013
A-E	(25)	4	(15)	(78)	81	42
(A-E)/E	(1%)	0%	(1%)	(4%)	4%	2%



* 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.
  - Nielsen et al (2015) has a peak in 2017 of 2,079 deaths.
  - 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.

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Questions

Comments

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.

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