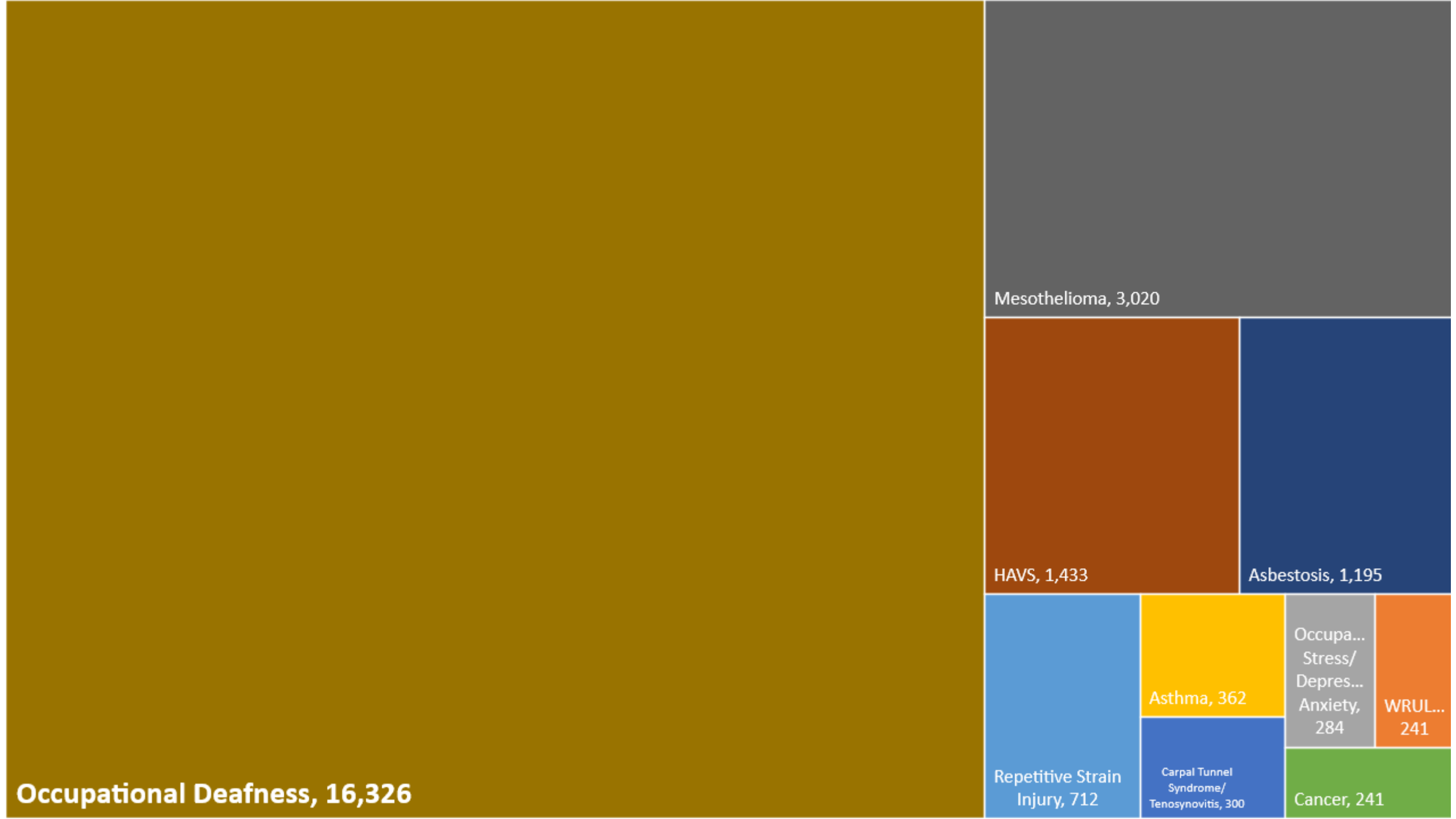
HCA | UK HEARING CONSERVATION ASSOCIATION

Noise At Work

Clare Forshaw
Founder & Director UKHCA
Lead for Occupational Health & Hygiene Rail Safety & Standards Board

hearingconservation.org.uk


Occupational Deafness, 16,326
Mesothelioma, 3,020
HAVS, 1,433
Asbestosis, 1,195
Repetitive Strain Injury, 712
Asthma, 362
Occupa... Stress/ Depres... Anxiety, 284
WRUL... 241
Carpal Tunnel Syndrome/ Tenosynovitis, 300
Cancer, 241

It’s Not Just about Hearing Loss…

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

Dementia & Hearing Loss

Mild hearing loss: **2 times**
more likely to develop dementia

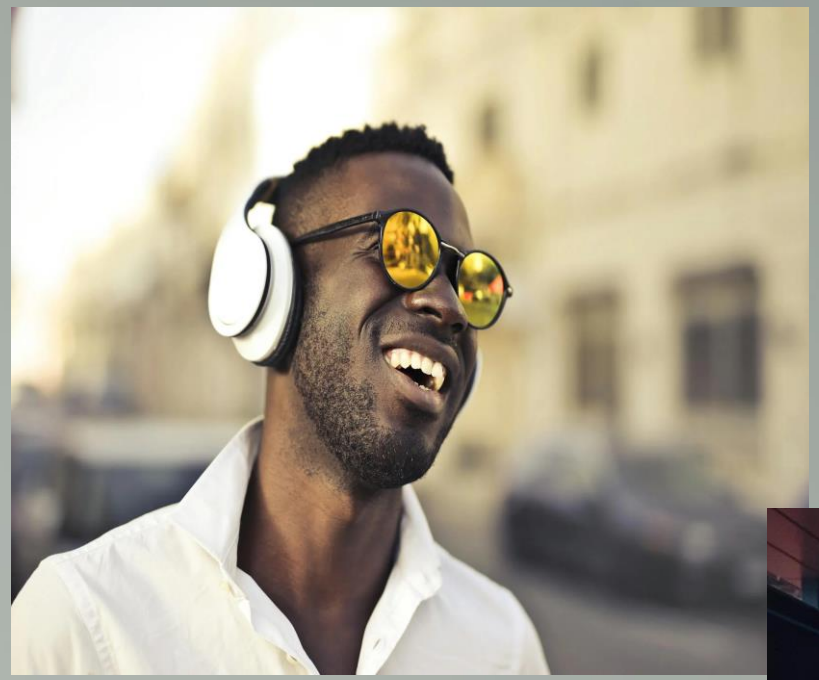
Moderate hearing loss: **3 times**
more likely to develop dementia

Severe hearing loss: **5 times**
more likely to develop dementia

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

Exposure to Noise is changing…



HCA | UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

Listening Habits

Can easily get significant daily dose

1 hour of headphone music at approx. 94dBA

15 minutes in a nightclub at approx. 100dBA

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

HSE Workplan

- HSE Inspectors have started an Inspection Programme focused on Workplace Noise
- First action on noise from HSE for nearly 30 years!!

- HSE will initially focus on Hearing Protection use and management

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

HSE Workplan

- Report on phase 1 findings at UKHCA event November 2024
- 2025 next phase of inspection programme focused on control
- ***2026? Likely to be looking at occupational health surveillance…***
- 2027/28 Re-run of hearing protection check

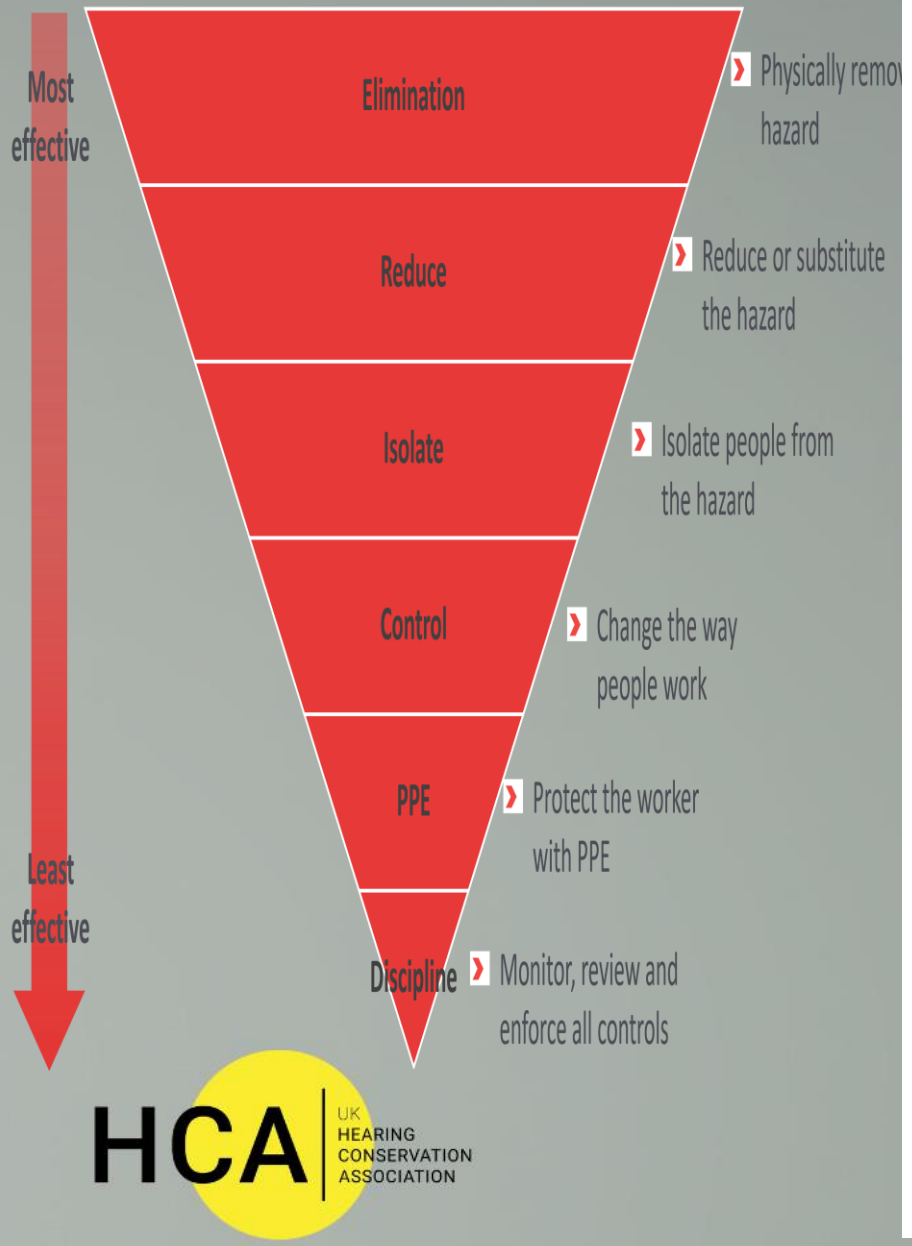
Hearing Conservation - An Integrated Approach

- Rigorously apply the hierarchy of control!
- Avoid reliance on hearing protection!
- Ongoing assurance that controls are working;
  - Feedback from Health Surveillance!
- Helping workers away from the workplace with noise exposure
- Looking beyond hearing loss to other health and wellbeing impacts

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

Hierarchy of Controls



HCA | UK HEARING CONSERVATION ASSOCIATION

Most effective

Stop the noise!	- Know the 'noisy' tasks/processes/machinery and understand if the activity or source is necessary. - Design-out noisy activities (e.g. cutting or fabricating off-site, no noise alternative processes)
Keep it quiet	- Buy Quiet - use manufacturers data to help determine quieter plant, equipment and tools - Design-in quieter process (e.g. bore piles rather than impact piling, or use of a rubber hammer rather than a metal) - Switch things off when not in use
Turn it down	- Use barriers, screens or enclosures around noisy area - Use noise absorption materials. - Keep on top of maintenance and repair. - Using electrically powered tools and equipment
Move away	- Segregate noisy work areas and remove those in the vicinity, where possible - Plan and organise work areas to reduce sound by implementing time restrictions. - Signage and warning around site and on equipment/plant powered tools and equipment
Protect the ear	- Adequate and suitable against the risk, for the person and environment - Provides good fit for wearer with protection of correct type - Training and supervision

Least effective

Role of Health Surveillance

- Health surveillance is a legal requirement where workers may be harmed despite controls (usually where reliance on PPE)
- Allows for **early** identification of ill health in order to help identify any corrective action needed.
- Can identify vulnerable or susceptible workers
- May require referral or advice for non work-related issues identified

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

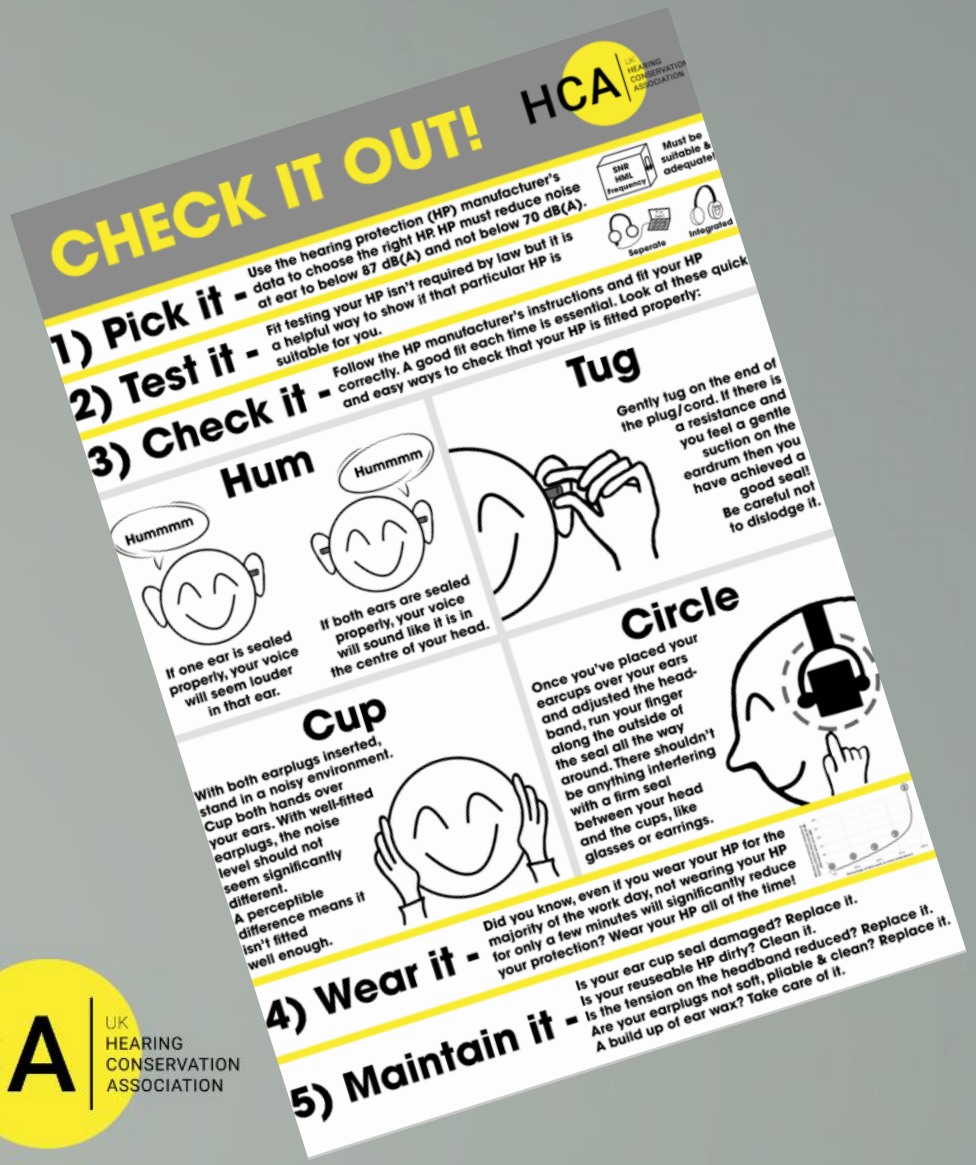
Role of Health Surveillance

- Risk based; understanding exposure profile and feeding back grouped anonymised data
- It is a final check that controls are working and effective
- Opportunity to advise/coach employee
- Requires feedback to the employer – grouped anonymised data

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

Coaching & Advice



HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

What is Noise Health Surveillance

- Required at or above 85dB (regular and frequent exposure)
- Noise & Health Questionnaire followed by Pure Tone Audiometry
- Guidance laid out in L108

- Requires soundproof environment
- Adequate instruction & compliance
- Measure of the complete auditory pathway

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

Challenges!

- Current Noise Health Surveillance is NOT picking up cases of NIHL!
- Initial aim of categorisation scheme - primarily to simplify feedback to employers
- However – has become a default automated churn data management tool
- Changes by HSE are highlighting the need to investigate and interrogate the audiogram

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

History of Noise Health Surveillance

- Audiometry at Work (MS26)

- 2003 Physical Agents Directive (Noise)
- 2005 Controlling Noise at Work Regs
- L108 guidance

- Updated L108 in 2021

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

HSE Categorisation Scheme 'New'

- Interpretation of audiogram (NIHL seen on audiogram)
- Referral to a 'doctor' for diagnosis

Category	NIHL seen on audiogram?	Calculation†	Action
1 Acceptable hearing ability	No*	Sum of hearing levels at 1, 2, 3, 4 and 6 kHz	Repeat health surveillance at next routine interval
2 Mild hearing loss	Stable NIHL may be present+	Sum of hearing levels at 1, 2, 3, 4 and 6 kHz	Consider earlier repeat health surveillance than routine, taking into account factors such as extent of hearing loss
3 Significant hearing loss or new/ progressive NIHL	Yes, newly identified or progressive NIHL may be present (this category may also include more severe but stable NIHL)	Sum of hearing levels at 1, 2, 3, 4 and 6 kHz	Refer for medical assessment. Timing of next health surveillance depends on outcome of assessment
4 Rapid hearing loss+ Reduction in hearing level of 30 dB or more, within 3 years or less	Possible	Sum of hearing levels at 3, 4 and 6 kHz	Refer for medical assessment. Timing of next health surveillance depends on outcome of assessment

* If NIHL is or may be present, the worker cannot be Category 1.

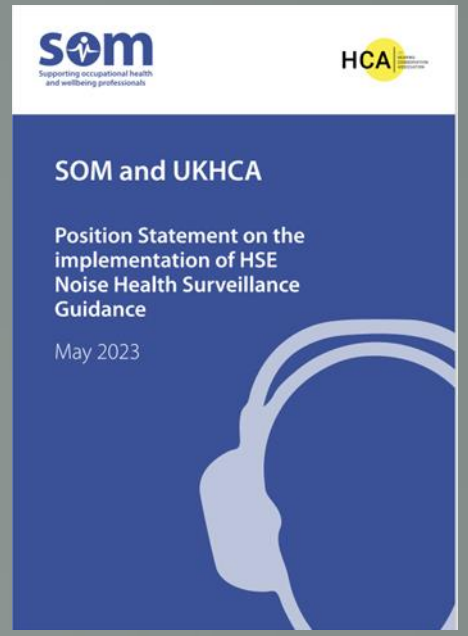
+ By definition at least one previous audiogram must be available for comparison.

† Compare value with figure given for appropriate age band and gender in Table 13.

HCA UK HEARING CONSERVATION ASSOCIATION

SOM/UKHCA Position Statement

- Clarification that Noise HS is not a diagnostic methodology BUT looks for indications of NIHL
- Provides guidance on how to review audiogram to determine likelihood of NIHL
- Clarification on when to refer to an OH Physician



HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

Outstanding Issues

- When is a notch not a notch!!

Whose notch is it anyway?

Hoffman	• *any threshold at 3, 4 or 6 kHz exceeds by 15 dB HL the average threshold in the low/middle frequencies, 0.5 and 1 kHz, and the threshold at 8 kHz is at least 5 dB HL better (lower) than the maximum threshold at 3, 4 or 6 kHz.*
Coles	• *high-frequency notch when the hearing threshold level at 3 and/or 4 and/or 6 kHz is at least 10 dB HL greater than the thresholds at 1 or 2 kHz and at 6 or 8 kHz*
The 4-kHz notch	• *hearing thresholds at 2 and 8 kHz that are both at least 10 dB HL lower than (better than) the threshold at 4kHz.*
Wilson	• *thresholds at 2 and 8 kHz that are both at least 10 dB HL lower than (better than) the threshold at the notch frequency of interest (3, 4 or 6 kHz).*

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

Outstanding Issues!

- What is a baseline audiogram
- What is ‘Stable’ NIHL
- Importance of understanding impact of test conditions

- Simplify ‘process’ of interrogation and interpretation

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

Opportunities

- Improved implementation and interpretation of PTA
- A new test?....
  - SINT
  - Otoacoustic emissions testing
- Look at other health impacts?
- Tiered approach
- Linking with specialists

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

In Summary

- A clearer definition and review of good practice for noise health surveillance would be useful
- In the meantime, we need to do our best to protect people, ensuring noise and hearing issues are given due attention

HCA UK HEARING CONSERVATION ASSOCIATION

hearingconservation.org.uk

A new era in hearing conservation

LISTEN UP CONFERENCE 2024

5th November 2024. The Birmingham Conferences and Events Centre

RAIL SAFETY AND STANDARDS BOARD

Clare.Forshaw@rssb.co.uk

https://hearingconservation.org.uk/

uk-hearing-conservation-association

@uk_hearing