

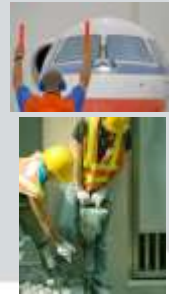
# Research and policy responses to loud noise in Australian workplaces

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## Occupational noise-induced hearing loss

- Preventable but irreversible condition
- Costly to individuals and their families - significant social handicap
- Costly to organisations via increased employee turnover and absenteeism, lower performance and possible contribution to workplace accidents
- Costly to Australian society via demand on health and social services
- Total economic cost of occupational noise-induced hearing loss (ONIHL) estimated to be AU \$300 million annually



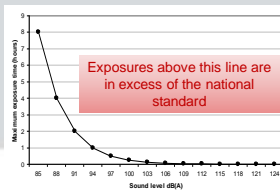
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## Regulations and codes of practice

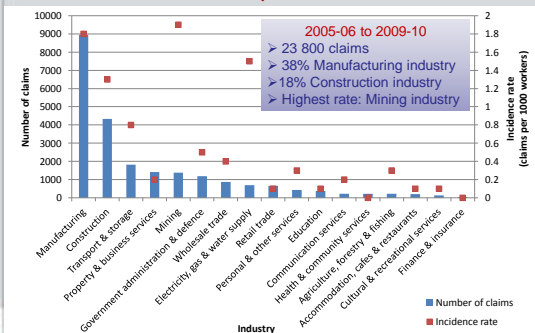
- 1989 National Strategy for the Prevention of Occupational Noise-induced Hearing Loss
- 1993 National Standard for Occupational Noise
- 1993 National Code of Practice for Noise Management and Protection of Hearing at Work
- 2000 Amendment of National Standard and Code of Practice to update the measurement of peak noise

$L_{Aeq, 8h}$  85dB(A)  
 $L_{C, peak}$  140dB(C)

The sound from a jackhammer at 10 meters is about 100 dB



## Workers' compensation data



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## Occupational noise induced hearing loss

Despite regulating occupational noise exposure for more than 15 years we still have a problem...

- 1) How big is this problem and where is it?
- 2) Why do we still have this problem?
- 3) What are we doing about it?



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## How big and where is the problem? Noise exposure surveillance research

- In 2008, 4500 workers across Australia were surveyed by telephone
- Workers were asked about:
  - their duration of exposure to loud noise (per day or week)
  - the provision of specific noise exposure controls
- Demographic and employment information were also collected

Loud noise was defined as noise so loud a person would have to raise their voice to speak to someone 1m away. This corresponds to about 85 dB.



<http://www.safeworkaustralia.gov.au/AboutSafeWorkAustralia/WhatWeDoPublications/>



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## How big and where is the problem?

### Main findings of the noise exposure surveillance research

- 32% of workers surveyed reported exposure to loud noise
- The following employment and demographic factors were associated with noise exposure:
  - **Gender:** male workers were more likely to be exposed
  - **Age:** young workers were more likely to be exposed
  - **Night work:** night workers were more likely to be exposed
  - **Occupation:** Technicians & trades workers, Labourers and Machinery operators & drivers
  - **Industry:** Manufacturing, Construction, Transport & storage, Agriculture, forestry & fishing

## How big and where is the problem?

### Main findings of the noise exposure surveillance research

- Duration of exposure to loud noise varied with:
  - **Industry:** Manufacturing, Transport & storage, Construction, Agriculture, forestry & fishing
  - **Occupation:** Machinery operators & drivers, Labourers & Technicians & trades workers
  - **Workplace size:** larger work places were associated with longer exposures

## How big and where is the problem?

### Main findings of the noise exposure surveillance research

Control provision was affected by:

- **Workplace size** – the likelihood of control provision improves with increasing workplace size
- **Occupation** – Machinery operators & drivers low odds of control provision
- **Industry** – Manufacturing industry has 'best' control provision

Type of control	% of exposed workers who reported control was provided
PPE	72%
Engineering controls	44%
Training	41%
Administrative controls	36%
None of the surveyed controls	18%

## Why do we still have a problem?

### Worker and organisation attitudes research

#### Getting Heard: effective prevention of hazardous occupational noise

##### Background

An occupational noise-induced hearing loss research project funded by the Australian Government Department of Health and Ageing under the Hearing Loss Prevention Program, 2008–10

##### Main Aim

Determine the key factors (barriers and enablers) in the effective control of exposure to hazardous occupational noise



## Why do we still have a problem?

### Worker and organisation attitudes research

#### Getting Heard: effective prevention of hazardous occupational noise

##### Work program

- Literature review of key barriers and enablers
- Literature review of economic factors
- Cost-benefit model of the impact of noise control
- On-site measurement of noise levels
- Focus groups with people in at-risk industries
- Survey of 1100 workers and 1000 employers
- 50 in depth, face to face interviews with employers



## Why do we still have a problem?

### Main findings of the worker and organisation attitudes research – Getting Heard

#### Strongest barriers to effective noise control and ONIHL prevention:

- over-reliance on personal hearing protectors
- infrequent and improper use of personal hearing protectors
- lack of prominence of noise as a serious work health and safety issue
- lack of consideration of potential benefits of effective noise control
- lack of information on machinery / plant noise levels

## Why do we still have a problem?

Main findings of the worker and organisation attitudes research – Getting Heard

Potential enablers of the adoption of effective control prevention measures :

- greater economic incentives
- managerial commitment to work health and safety

## Why do we still have a problem?

Policy implications of the worker and organisation attitudes research – Getting Heard

### KEY AREAS

**Saliency**

Loud noise/ONHL not major issues compared to other workplace hazards

**Self efficacy**

Some workers are not clear or confident about available solutions

**Economics**

Some believe that effective noise control is too expensive

**Enforcement**

Education and enforcement of regulations are vital for achieving more effective noise control and ONHL prevention

## Why do we still have a problem?

Policy implications of the worker and organisation attitudes research – Getting Heard

### WAY AHEAD

- Clear and well-enforced regulation
- Innovative education

Clear, concise, and readily available information about the real risks, available solutions, and legal duties

Opinion leaders and role models ('safety champions') to complement existing and future education efforts

Innovative methods to correct common beliefs that noise control is too expensive, too difficult, or not worth worrying about

## What are we doing about the problem? Work health and safety policy initiatives

- Australia is harmonising work health and safety laws including regulations for noise
- New regulations
  - Common legislative framework based on National Standard
  - Audiometric testing
  - Risk assessments and control provision
  - Duty on plant designers and manufacturers to minimise noise emissions
  - Noise emission information must be provided for plant
- Regulations in place in five out of nine jurisdictions
- New code of practice
  - Detailed guidance and information on risk assessments, controls, PHPs etc
  - Information on ototoxic substances

## What are we doing about the problem? Work health and safety policy initiatives

- Future work
  - Review the suitability of the noise exposure standard
  - Ototoxic substances and vibration
- There is still room for improvement...
  - Plant, machinery and equipment design
  - Encouraging safety to be considered when purchasing machinery or plant e.g. star rating system for noise emissions
  - Compliance effectiveness studies that help regulators understand why some interventions work and others don't
  - Raising community awareness of occupational noise as a serious issue
  - Coordination of policy responses to occupational noise with public health policy

More information?

Come see my poster 22 March 10-11 am  
[fleur.decespigny@safeworkaustralia.gov.au](mailto:fleur.decespigny@safeworkaustralia.gov.au)