

Biological hazards in Australian workplaces

Findings and policy implications of a survey of Australian workers' exposures to biological hazards

Fleur Champion de Crespigny, Leone Leyshon & Caroline Reid

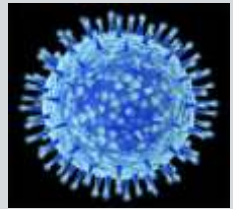


Biological hazards

Organic substances that pose a threat to the health of humans and other living organisms

- Pathogenic microorganisms, viruses, toxins, spores, fungi and bio-active substances
- Biological vectors of disease

Worldwide, 320 000 workers die each year from communicable diseases caused by work-related exposures to biological hazards (Driscoll et al. 2005, OSHA 2007)



Biological hazards: regulations and guidance for workers in Australia

- No regulations
- National Code of Practice for work-related exposure to Hepatitis and HIV
- Limited guidance material available on work health and safety authority websites
- History of communicable disease being considered within public health domain – rather than as a work health and safety issue



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Biological hazards: state of knowledge in Australia

- Workers' compensation data indicate around 1300 workers are compensated annually for diseases attributed to animal, human or biological factors
 - Probably a considerable underestimate
- No data on the extent of exposure to biological hazards in Australia
 - Who is exposed while at work? What are they exposed to?
- No data on the provision of controls for biological hazards
 - Are workers protected?



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Biological hazards: exposure research

- In 2008, 4500 workers from around Australia were surveyed by telephone
- All workers were asked to:
 - estimate the duration (hours per day or week) they worked in places where there were biological materials
 - describe the main type(s) of biological materials at their workplaces



<http://www.safeworkaustralia.gov.au/AboutSafeWorkAustralia/WhatWeDo/Publications/Pages/NHEWS-biological.aspx>



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Biological hazards: exposure research

- Exposed workers were asked whether they or their employer do any of the following to prevent health problems caused by exposure to biological materials:
 - Provide protective clothing: gloves, masks, protective clothing and safety goggles
 - Provide engineering, warning or waste disposal solutions: labelling and warning signs, safety cabinets and ventilation systems
 - Provide training on the safe handling of biological materials
- Worker demographic and employment information were also collected



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Biological hazards: results of exposure study

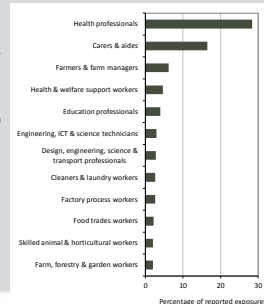
Biological material	Percentage of workers surveyed	Percentage of exposed workers
Human bodily matter <i>Includes: blood, urine / faeces, vomit, saliva, breast milk etc</i>	14.5%	74.9%
Animal products <i>Includes: raw / cooked meat, offal, skins, blood, milk, eggs</i>	3.6%	18.3%
Living animals <i>Includes: cattle, sheep, poultry, fish, and their urine / faeces</i>	2.3%	11.9%
Biohazard waste, sewerage & rubbish	0.7%	3.4%
Laboratory cultures <i>Includes: animal and human tissue cultures, bacterial and cell cultures</i>	0.5%	2.8%
Total reported exposure to biological materials	19.4%	-

Biological hazards: results of exposure study

- The industries in which the largest proportions of workers reported exposure to biological materials were:

- Health & community services – 57%
- Agriculture, forestry & fishing – 33%
- Accommodation, cafes & restaurants – 30%
- Cultural, recreational & personal services – 19%

- Agriculture workers reported the longest exposure durations



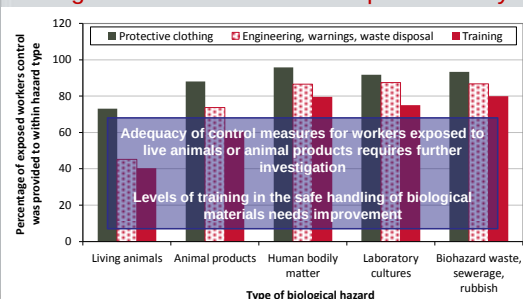
Biological hazards: results of exposure study

- Major differences between main industries in terms of worker exposure as it relates to:
 - Gender
 - Education level
 - Workplace size
- Possible under-reporting of exposures
 - Moulds, plants, algae
 - Wastes, sewerage
 - Live animals

Biological hazards require a tailored policy response

Lack of awareness of biological hazards affects workplace risk assessments and mitigation

Biological hazards: results of exposure study



Policy response to biological hazards

- Workshops held around Australia on blood borne pathogens
- Workshops attended by health and allied health workers, police, construction workers, waste disposal workers, council home care workers, park rangers, work health and safety reps from mines, embalmers, dentists and dental assistants
- Workshop purpose was to discuss the possible revision of the national code of practice for blood borne diseases (Hep B and HIV), but also to establish general sentiment for codes and/or regulation of biological hazards broadly

Policy response to biological hazards

Main outcomes of the workshops

- Expansion of code of practice on blood borne pathogens
- Development of new guidance material
- Education
- Possible regulatory intervention

Include exposure to pathogens in blood and bodily substances

Applicable to all workplaces

Advice on risk assessment procedures

Biological hazards framework
-should include other pathogens / sources of exposure
Specific industry, occupation, exposure scenario guidance

Support for engineering controls e.g. SEMDs

Biological hazards: future policy work

- Further consultation with relevant industry groups to identify issues and develop guidance materials
- Development of a biological hazards framework for future guidance, codes of practice or regulation development
 - Based on type of biological material exposure
 - Broken down by occupation / industry



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More information?

Come see my poster 22 March 10-11 am

Fleur.decrepigny@safeworkaustralia.gov.au

