



ANMF (Vic Branch) Policy

Prevention of exposure to harmful substances

Incorporating Glutaraldehyde and Exposure to latex allergens policies

1. Introduction

The Australian Nursing and Midwifery Federation (Victorian Branch) [ANMF (Vic Branch)] recognises that nurses, midwives and carers working in healthcare environments and other industries are at risk of exposure to harmful substances during the course of their work, creating a risk to their health and safety.

Risk of exposure is dependent on a range of factors such as: exposure prevention and control practices, the clinical context; instruction, training and supervision and the clinical environment.

2. Objective

The objective of this policy is to support the prevention and management of risks to the health and safety of Victorian nurses, midwives and carers, arising from exposure to harmful substances, during the course of their work.

3. Scope

This policy applies to all ANMF (Vic Branch) members, and all nurses, midwives and carers eligible for ANMF (Vic Branch) membership working in Victorian healthcare environments and other industries who may be exposed to harmful substances as a result of their work. This policy is not limited to substances classified as 'hazardous substances' and takes a precautionary approach to substances whereby the effects may not yet be known.

4. Definitions

Cytotoxic drugs: are therapeutic agents intended for, but not limited to, the treatment of cancer. These drugs are known to be highly toxic to cells, mainly through their action on cell reproduction. Many have proved to be carcinogens, mutagens or teratogens. They are increasingly being used for the treatment of cancer and other medical conditions.¹

Dangerous goods: are classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously damage property or the environment, as well as health as a result of these effects.

Glutaraldehyde: is a chemical disinfectant, previously widely used in healthcare environments to disinfect medical and surgical equipment not suitable for high temperature sterilisation. Exposure to glutaraldehyde may cause throat and lung irritation, asthma and difficulty breathing, dermatitis, nasal irritation, amongst other acute effects. Further, exposure to disinfectants in health care workers has been suggested to be associated with respiratory health outcomes, including chronic obstructive pulmonary disease (COPD).²

¹ WorkSafe Victoria, January 2003. *Handling cytotoxic drugs in the workplace*. Accessed via <https://www.worksafe.vic.gov.au/resources/archived-handling-cytotoxic-drugs-workplace>

² Dumas, Oriane, Varraso, Rahpaelle, Boggs, Krislyn M., *Association of Occupational Exposure to Disinfectants with Incidents of Chronic Obstructive Pulmonary Disease Among US Female Nurses*, *JAMA Network Open* 2019 Oct, 2(10), (accessed via <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2753247> 3 March 2021).

Hazardous substances: can be any substance, whether solid, liquid or gas, that may cause harm to health. Hazardous substances are classified on the basis of their potential health effects, whether acute (immediate) or chronic (long-term). Harm to health may happen suddenly (acute), such as dizziness, nausea and itchy eyes or skin; or it may happen gradually over years (chronic), such as dermatitis or cancer. Some people can be more susceptible than others.

Personal Protective Equipment (PPE): is protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection as a result of exposure to a hazard.

Respiratory Protective Equipment (RPE): is a particular type of PPE used to protect the individual wearer against the inhalation of substances.

Respiratory Protection Program (RPP): the primary objective of a respiratory protection program is to prevent exposure to air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, vapours, sprays or other agents, and thus to prevent occupational illness. A program administrator must be responsible for the implementation and maintenance of the program.

Safety Data Sheet (SDS): is a document that provides health and safety information about products, substances or chemicals that are classified as harmful substances or dangerous goods.

Surgical plume: also known as surgical smoke, cautery smoke, smoke-plume, diathermy plume, aerosol, bio-aerosol, vapour and air-contaminants, is a dangerous by-product produced by the electrosurgical instruments used to dissect tissue, provide haemostasis and perform laser ablation.

5. Policy

The ANMF (Vic Branch) policy is that:

- 5.1 Under the Victorian Occupational Health and Safety Act 2004, all employees have a right to perform their work in an environment that is safe and without risks to health, from exposure to harmful substances.
- 5.2 A precautionary approach to exposure to substances must be implemented to ensure that nurses, midwives and carers are not exposed to substances now that may cause health effects in the future, and as such, any substance where there is insufficient evidence of safety should be treated as harmful.
- 5.3 Exposure to harmful substances, like other occupational health and safety hazards, is most effectively addressed by prevention at the source. Therefore, determining the sources and causes of exposure to harmful substances provides the best opportunity to prevent exposure.
- 5.4 The ANMF (Vic Branch) supports the legislative rights of members to expect that the most effective hazard control measures will be implemented by the employer to eliminate or minimise, as far as reasonably practicable, risks to the health and safety arising from exposure to harmful substances.
 - 5.4.1 To this end, the ANMF (Vic Branch) supports the implementation of a systematic, risk management approach to preventing and minimising the risks of exposure to harmful substances, in consultation with Health and Safety Representatives. Further, ANMF (Vic Branch) expects the use of harmful substances in healthcare environments should be eliminated so far as reasonably practicable, including through use of safer alternatives where possible.
 - 5.4.2 Where there is a need to use such substances, this should be done in a way so as to minimise the risk and exposure of nurses, midwives and carers to the substances, through the implementation of appropriate controls, including alternative systems of

work, isolation of the source, appropriate source ventilation and atmospheric monitoring for effectiveness of controls.

- 5.4.3 PPE and RPE should not be used as a primary control for exposure and should be on top of existing controls to provide an additional level of assurance and protection.
- 5.5 Where a nurse, midwife or carer has been potentially exposed to a harmful substance, they should be offered immediate medical treatment as indicated, counselling, relevant testing and where appropriate, treatment to reduce the risk of ongoing illness.
- 5.6 Where a nurse, midwife or carer has potentially been exposed to harmful substances, the incident must be investigated, existing controls should be reviewed and if necessary, revised.

6. Key elements

6.1 Consultation and representation

- 6.1.1 The participation of and consultation with staff and their representatives, including the ANMF (Vic Branch) and Health & Safety Representatives (HSRs), is critical to the effective implementation of relevant and sustainable policies and procedures and risk control strategies for preventing and managing the risks associated with exposure to harmful substances.
- 6.1.2 Appropriate consultative and representative structures (including HSRs, an agreed OHS issue resolution procedure and OHS Committees) are necessary so as to encourage staff to report incidents (and 'near misses'), injuries/illness and unresolved issues related to exposure to harmful substances whilst at work.

6.2 Health and Safety Representatives (HSRs)

The ANMF (Vic Branch) supports involvement of HSRs in prevention of exposure to harmful substances through:

- 6.2.1 Encouraging staff to report all incidents of exposure to harmful substances and risks associated; eg - skin irritation caused by the wearing of PPE.
- 6.2.2 Representation of members of their Designated Work Group (DWG) and consultation with employers when undertaking hazard identification, risk assessment or development of controls, or incident investigations in relation to exposure to harmful substances.
- 6.2.3 Involvement in Health and Safety Committee (HSC) formulation, review and dissemination of policies, procedures and practices for prevention of exposure to harmful substances.
- 6.2.4 Development and implementation of an agreed OHS Issue Resolution procedure.
- 6.2.5 Issuing of Provisional Improvement Notices (PINs) or requests for WorkSafe Inspectors to attend the workplaces if the employer has not acted to resolve harmful substances exposure issues in a timely manner.

6.3 Employers

Employers must establish and maintain an effective approach to the prevention of exposure to harmful substances, which implements the hierarchy of control, and approaches it in the context of occupational health and safety risk management, as per the relevant OHS legislation. This should consider risks to nurses, midwives, carers, and patients. This will include action to ensure that the following hierarchy is implemented:

- 6.3.1 So far as it is reasonably practicable, eliminate any risk to nurses, midwives and carers associated with harmful substances at the workplace.
- 6.3.2 If it is not reasonably practicable to eliminate a risk associated with harmful substances, the employer must reduce the risks so far as is reasonably practicable by:
- 6.3.2.1 Substituting the substance with a substance that is less harmful; or a less harmful form of the substance.
 - 6.3.2.2 Isolating the source of exposure to the harmful substance.
 - 6.3.2.3 Using engineering controls.
 - 6.3.2.4 Combining any of the above risk control measures.
- 6.3.3 If a risk associated with harmful substances remains, having done all of the above, the employer must reduce the risk using administrative controls.
- 6.3.4 If a risk associated with harmful substances remains, having done all of the above, the employer must reduce the risk using by providing appropriate PPE, including RPE as appropriate.
- 6.3.5 Employers must develop and implement a Respiratory Protection Program (RPP) as an overarching document intended to minimise the risk of respiratory hazards, including harmful substances, using the 'Respiratory Protection Program guidelines' developed by Department of Health and Human Services as a guide to minimum standards and inclusions.³
- 6.3.6 Employers must consider, and comply with relevant OHS legislation and applicable regulations in preventing nurses, midwives, carers and patients from exposure to harmful substances and the consequences thereof, including:
- 6.3.6.1 Implementation of an appropriate procurement process for purchasing and sourcing products that do not contain harmful substances wherever practicable.
 - 6.3.6.2 Making readily accessible to nurses, midwives and carers a current safety data sheet for any harmful substances.
 - 6.3.6.3 Ensuring any container containing a harmful substance is appropriately labelled and any such substance decanted into another container is clearly labelled until it has been consumed and cleaned, or neutralised.
 - 6.3.6.4 Ensure that a hazardous substance contained in any machinery or equipment or process vessel is identified to nurses, midwives and carers who may be exposed to the substance.
 - 6.3.6.5 Ensuring containers of waste produced or generated at a workplace from harmful substances are identified.
 - 6.3.6.6 Ensure that a register is prepared and maintained of all harmful substances at the workplace.
 - 6.3.6.7 Reviewing and if necessary, revising measures implemented to control risks associated with harmful substances:
 - before any alteration is made to systems of work likely to change the level of risk
 - if adverse health effects have been identified by health monitoring
 - after an incident occurs involving harmful substances
 - if control measures do not adequately control the risk after receiving a request from an HSR

³ Department of Health and Human Services, Victorian Respiratory Protection Program guidelines, September 2020 (Version 1.1) <https://www.dhhs.vic.gov.au/victorian-respiratory-protection-program-COVID-19-pdf> (accessed 3 March 2021).

6.4 Environment and equipment

Providing a physical working environment that is conducive to prevention of exposure to harmful substances is critical to ensuring the safety of nurses, midwives and carers. This includes consideration and provision of the following:

- 6.4.1 Adequate and properly maintained ventilation systems.
- 6.4.2 Adequate and properly maintained extraction systems.
- 6.4.3 Adequate facilities and equipment for the safe handling and storage of harmful substances.
- 6.4.4 Adequate and appropriate facilities for the disposal and management of waste associated with use of such substances.
- 6.4.5 Adequate facilities to ensure good hygiene practices; eg - prohibiting eating, drinking and smoking in areas where drugs are handled and providing washing facilities.
- 6.4.6 Appropriate facilities and education for dealing with spillages and contamination (including potentially contaminated excreta from patients).
- 6.4.7 Employers must ensure that equipment provided for the use, handling and storage of harmful substances is appropriate, including through:
 - 6.4.7.1 Consultation with nurses, midwives and carers on the choice of equipment necessary to work free from exposure to harmful substances, including PPE and RPE.
 - 6.4.7.2 Ensuring adequate equipment is provided and is readily accessible as is necessary for nurses, midwives and carers to work free from exposure to harmful substances, including PPE and RPE.

6.5 Instruction, education, training and supervision

Employers must provide, for nurses, midwives and carers, sufficient information, training, instruction and supervision as is necessary to undertake work free from exposure to harmful substances. This includes provision of the following:

- 6.5.1 Regular face to face practical training in safe use, transport and disposal of harmful substances.
- 6.5.2 Regular face to face practical training on use of controls including personal protective equipment.
- 6.5.3 Adequate training in the effects of substances to which they may be exposed.
- 6.5.4 Appropriate health monitoring to identify at an early stage whether there have been exposures of concern, as appropriate to the substances in use.
- 6.5.5 Appropriately trained and resourced supervision.
- 6.5.6 Provision of knowledge and skills in managing issues around exposure to harmful substances for managers and supervisors.

6.6 Specific substance guidance

- 6.6.1 **Surgical plume** is a dangerous by-product ANMF (Vic Branch) members are exposed to in particular circumstances, including in many theatres. There is evidence that exposure to inhalation of surgical plume may be hazardous to health, and as such, ANMF (Vic Branch) policy is that a precautionary approach is taken; ie - elimination or reduction of exposure to surgical plume. In particular, employers must:
 - 6.6.1.1 Implement risk management processes to identify, assess and control surgical plume related hazards and risks.
 - 6.6.1.2 Prevent airborne contaminants found in surgical plume from reaching the breathing zones of persons in the operating room or treatment room by means of appropriate evacuation equipment at the source.

- 6.6.2 **Glutaraldehyde:** Exposure to glutaraldehyde is known to cause short term adverse health effects, and as well as being a sensitiser, where after repeated exposures an allergic response occurs. This means some workers will become very sensitive to glutaraldehyde and have strong reactions if they are exposed to even small amounts. Workers may get sudden asthma attacks with difficult breathing, wheezing, coughing, and tightness in the chest. Prolonged exposure can cause a skin allergy and chronic eczema, and afterwards, exposure to small amounts produces severe itching and skin rashes. As such, ANMF (Vic Branch) policy is that:
- 6.6.2.1 Glutaraldehyde use should be eliminated from all Victorian Healthcare Facilities except in rare and unavoidable situations where no safer alternative is available or practicable. Such situations include Trans Oesophageal Endoscopic (TOE) probes commonly used in some day procedure clinics and also paediatric probes, for which there appear to be no known equivalent / alternative to Glutaraldehyde for cold disinfection.
 - 6.6.2.2 Where there is no known equivalent / alternative to Glutaraldehyde, appropriate controls must be implemented, including automated enclosed systems, atmospheric monitoring for effectiveness of controls etc.
- 6.6.3 **Latex allergens:** Latex allergy reactions have become an increasing OHS issue for nurses, midwives and personal care workers, who are exposed to latex through the use of disposable latex gloves, amongst other exposures. Sensitivity to latex can develop over a period of time as a result of frequent exposure to the substance. There is no specific treatment available, however likelihood of the development of the sensitivity can be reduced by lessening exposure to the allergen and eliminating (as far as is practicable) exposure to latex products in sensitised individuals. ANMF (Vic Branch) policy is that employers must prevent and minimise the risk of exposure to latex allergens through implementation of risk management processes to identify, assess and control latex exposure hazards and risks.
- 6.6.4 **Cytotoxic drugs:** Exposure to cytotoxic drugs can cause acute health effects, such as skin and eye irritation, or light-headedness and nausea. There is little evidence available around chronic health effects, however due to their action, “medical opinion is such that even low-level exposure to cytotoxic drugs should be avoided as much as possible.”⁴ ANMF (Vic Branch) policy is that employer must prevent and minimise the risk of exposure to cytotoxic drugs through implementation of risk management processes to identify, assess and control cytotoxic drug exposure hazards and risks. Specifically, such measures to control exposure to cytotoxic drugs should include:
- 6.6.4.1 Using totally enclosed systems where reasonably practicable.
 - 6.6.4.2 Controlling exposure at source, for example, by using adequate extraction systems and appropriate organisational measures.
 - 6.6.4.3 Reducing the quantities of drugs used; the number of employees potentially exposed; and their duration of exposure, to the minimum.

⁴ WorkSafe Victoria, January 2003. *Handling cytotoxic drugs in the workplace*. Accessed via <https://www.worksafe.vic.gov.au/resources/archived-handling-cytotoxic-drugs-workplace>, p 3

6.7 ANMF (Vic Branch) members

ANMF (Vic Branch) supports involvement of members in the prevention of exposure to harmful substances through:

- 6.7.1 Reporting issues and incidents relating to exposure, or risks associated with wearing of PPE (eg - skin irritation) to management and HSRs.
- 6.7.2 Consultation through HSRs on control measures to prevent exposure to harmful substances.
- 6.7.3 Making a claim for workers' compensation for any physical or psychological injury suffered as a result of exposure to harmful substances.

7. ANMF (Vic Branch) commitment

- The ANMF (Vic Branch) will continue to support members and HSRs to prevent and reduce exposure to harmful substances in the workplace
- The ANMF (Vic Branch) will continue to promote and conduct (and support others who wish to conduct) research, training and publicity

8. Relevant legislation

- Occupational Health and Safety Act 2004
- Occupational Health and Safety Regulations 2017

9. Relevant guidance

- ANMF (Vic Branch) Occupational Health and Safety Policy