

|  |
| --- |
| Victorian Respiratory Protection Program guidelines |
| 26 June 2023 (Version 1.4) |
| OFFICIAL |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Revision historyVersion 1.0 first published 19/09/2020

| Version | Date | Revised by | Changes |
| --- | --- | --- | --- |
| Version 1.1 | 25/09/2020 | Health and Wellbeing division | * Title changed from ‘Victorian Respiratory Protection Program’ to ‘Victorian Respiratory Protection Program guidelines’
* Page 2 updated to include an accessibility tag and imprint.
* Sect 4.4 Selection of respiratory protection equipment (RPE) figure converted to an accessible table
* Sect 5.2 Prioritisation for fit testing figure converted to an accessible format
 |
| Version 1.2  |  |  | Sect 1.2 Expanded scope Sect 2. Definition of HCW expanded Sect 4.1-Revised Risk assessment advice Sect 4.4-Revised definitions of respirators and PAPR advice Sect 4.6 Additional resources including links to donning and doffing videos and posters Sect 5.1- Determining when fit testing is required- additional advice Sect 5.5 Facial hair and reference to Singh Thattha technique (new) Sect 5.6 Competencies of fit testers (new) Sect 5.8 Fit testing of students on clinical placements (new) Sect 5.11 Revised advice for health services if a HCW is unable to achieve a fit with any respirator available at the time of testing. Sect 6- Further resources and links  |
| Version 1.3 | 01/03/2023 | Commissioning and System Improvement Division  | * Sect 4.4- remove reference to TGA Registration
 |
| Version 1.4 | 26/03/2023 | Commissioning and System Improvement Division | * Sect 2- Revision of definitions
* Sect 5.8 - Expanded section on student fit testing
* Updated links to websites and resources
 |

 |

Contents[1. Introduction 4](#_Toc139017047)[1.1 Objectives 4](#_Toc139017048)[1.2 Scope 4](#_Toc139017049)[2. Definitions 4](#_Toc139017050)[3. Roles and responsibilities 5](#_Toc139017051)[4. Respiratory Protection Program requirements 6](#_Toc139017052)[4.1 Risk assessment of respiratory hazards 6](#_Toc139017053)[4.2 Maintenance of a Respiratory Protection Program 7](#_Toc139017054)[4.3 Appointment of a program administrator 7](#_Toc139017055)[4.4 Selection of respiratory protection equipment (RPE) 8](#_Toc139017056)[4.5 Medical evaluation 10](#_Toc139017057)[4.6 Education and training 10](#_Toc139017058)[4.7 Use of RPE 11](#_Toc139017059)[4.8 Maintenance 12](#_Toc139017060)[4.9 Record keeping 12](#_Toc139017061)[5. Fit testing 13](#_Toc139017062)[5.1 Determining when fit testing is required 13](#_Toc139017063)[5.2 Identification of employees for fit testing 13](#_Toc139017064)[5.3 Fit testing methodology 14](#_Toc139017065)[5.4 Facial hair 15](#_Toc139017066)[5.5 Competency of fit testers 16](#_Toc139017067)[5.6 Fit-testing students on clinical placement 16](#_Toc139017068)[5.7 Fit checking 17](#_Toc139017069)[5.8 Infection control 17](#_Toc139017070)[5.9 Data, reporting and record keeping of fit testing 17](#_Toc139017071)[5.10 Support following fit testing 18](#_Toc139017072)[6. Relevant information 18](#_Toc139017073)[Australian/New Zealand Standards 18](#_Toc139017074)[Occupational Health and Safety Act 2004 18](#_Toc139017075)[Further resources 19](#_Toc139017076)1. IntroductionThe COVID-19 pandemic resulted in a significant increase in the use of personal protective equipment (PPE) and more specifically the use of respiratory protective equipment (RPE). Whilst COVID-19 has reinforced how essential RPE is, it is important to note that respiratory hazards extend beyond infectious diseases (i.e. COVID-19, tuberculosis, measles, varicella, influenza and other airborne precautions) and includes exposure to certain chemicals, such as disinfectants, surgical smoke and other chemical/biological/radiological hazards.Given the significant uptake in usage of RPE and the subsequent need for health care workers (HCWs) to be trained and supported to wear and use RPE effectively, Respiratory Protection Program (RPP) guidelines have been developed to help best implement respiratory protection processes to minimise the risk from respiratory hazards, such as infectious agents and diseases.The use of the RPE is the last line of defence in the hierarchy of controls and infection prevention measures, which includes immunisation, isolation, engineering controls, environmental measures, administrative controls, hand hygiene and lastly PPE including RPE.Supporting information is available from [WorkSafe Victoria](https://www.worksafe.vic.gov.au/prevention-and-management-exposure-covid-19-healthcare-and-social-assistance-industry) <https://www.worksafe.vic.gov.au/prevention-and-management-exposure-covid-19-healthcare-and-social-assistance-industry> and the [Department of Health (DH)](https://www.health.vic.gov.au/covid-19-infection-prevention-control-guidelines/personal-protective-equipment-ppe)https://www.health.vic.gov.au/covid-19-infection-prevention-control-guidelines/personal-protective-equipment-ppe 1.1 ObjectivesThe objectives of this document are to:* Provide guidance and outline the expectations that health services should adhere to when implementing their respiratory protection programs.
* Improve HCW’s and health service knowledge of RPE to minimise HCW’s exposure to respiratory hazards.

1.2 ScopeAll Victorian health services where health care workers including volunteers and students on clinical placement, have the potential to be exposed to respiratory hazards are required to establish and maintain an RPP. 2. Definitions**Aerosol means:** a mist composed of very small, lightweight particles that can remain suspended in the air for long periods of time and can travel long distances. These particles can penetrate the lower parts of the respiratory system and are generally <5 microns in diameter.**Aerosol Generating Behaviours (AGBs) means:** Behaviours that are more likely to generate higher concentrations of infectious respiratory aerosols such as persistent or severe coughing, screaming, or shouting, or heavy breathing and panting during active labour.**Aerosol-Generating Procedures (AGP) means:** procedures that are more likely to generate higher concentrations of infectious respiratory aerosols such as bronchoscopy, tracheal intubation, non-invasive ventilation, high flow nasal oxygen therapy, manual ventilation before intubation, intubation, cardiopulmonary resuscitation, suctioning, sputum induction and nebuliser use. **Airborne transmission means:** the spread of an infectious agent caused by the dissemination of droplet nuclei (aerosols) that remain infectious when suspended in air over long distances and time.**Droplet transmission means:** when a person is in close contact (within 1.5 metres) with an infected person who has respiratory symptoms (e.g. coughing or sneezing) or who is talking or singing; in these circumstances, respiratory droplets that include virus can reach the mouth, nose or eyes of a person and can result in infection. **Fit check (user seal check) means:** a process of ensuring RPE achieves a good seal once it has been applied and should occur each time RPE is donned, even if fit testing has previously been undertaken.**Fit test means:** a validated method of matching RPE to an individual. There are two methods of facial fit test – qualitative and quantitative. Both methods are valid and appropriate.**Healthcare Worker (HCW) means:** for the purposes of this document includes all staff working in the health and aged care sector, including volunteers and students on clinical placement. This includes health care workers and care staff, infection prevention control professionals, managers, support workers and other healthcare staff (ie. administration, food services and ancillary staff) in settings such as acute/subacute healthcare, first responders and patient transport, residential care facilities and primary and community health care.**Powered air-purifying respirator (PAPR) means:** A device incorporating a half facepiece, full facepiece or hood which provides the wearer with air filtered through a powered filtering unit, comprising a filter or filters, and an electrically operated blower unit.**Respiratory Infection means:** an infectious process affecting any part of the upper or lower respiratory tract. Symptoms can include fever, runny nose, sore throat and cough, joint or muscle pain, lethargy, chest pain and difficulty breathing.**Respiratory Protective Equipment (RPE) means:** equipment designed to protect the wearer and prevent the inhalation of contaminated air (e.g. ‘P2 respirator’). Includes filtering face piece respirators, elastomeric respirators and PAPR.**Single use surgical mask (levels 1, 2 or 3 barrier) means**: a loose-fitting, single-use, fluid resistant disposable mask that creates a physical barrier between the mouth/nose of the wearer and direct droplet spray, as well as reducing the spread of respiratory droplets from the wearer. Single use surgical masks are not designed to provide respiratory protection to the user. They are designed to reduce the spread of infection from the user to the patient and provide limited respiratory protection to the wearer against aerosols. 3. Roles and responsibilitiesWhere it is identified that there is a risk of respiratory hazards, including COVID-19, at a workplace, employers must eliminate the risk to the greatest degree possible. Where it is not possible to eliminate the risk, it must be controlled so far as is reasonably practicable. Where it is identified by a risk assessment that a HCW is required to use RPE, the health service has a responsibility to implement the RPP. Health services are responsible for:* familiarising themselves and complying with this document and relevant standards
* documenting and implementing a RPP in line with this document
* providing adequate resourcing to ensure the program’s continued effectiveness
* assigning and providing full support to the program administrator
* providing RPE to minimise the risk to health and safety, including ensuring equipment is suitable for the nature of work and the hazard
* consulting with workers when selecting RPE
* providing education and training on the use of selected RPE
* undertaking HCW medical evaluation (as necessary) to support RPE selection.

The program administrator is responsible for:* the effective management of the program (see section 4.3).

HCWs are responsible for:* using RPE in accordance with the education and training they are provided
* reporting any damage, defects, or non-function of the RPE provided
* reporting any physical or medical limitations that may have an impact on their ability to wear and use RPE correctly.

Further information on employer responsibilities in relation to COVID-19 can be found at [Worksafe – Coronavirus (COVID-19)](https://www.worksafe.vic.gov.au/coronavirus-covid-19) <https://www.worksafe.vic.gov.au/coronavirus-covid-19>.4. Respiratory Protection Program requirementsA Respiratory Protection Program includes several elements designed to protect workers from workplace respiratory hazards including COVID-19, airborne infectious agents, dust and other particles. It is the responsibility of each health service that the elements contained within these guidelines are included in a workplace RPP.4.1 Risk assessment of respiratory hazardsIt is essential that an appropriate risk assessment of respiratory hazards is undertaken prior to implementation of an RPP and that the risk assessments are regularly reviewed. Risk assessment is the process of determining the likelihood of a person being exposed to a health hazard and the impact on that person’s health that exposure has. Risk assessment is also used to determine whether the controls currently in place are adequate and, where RPE is required to assist in controlling the risk, what type of RPE is needed.The effective management of risks to health is achieved by identifying hazards, assessing the risk, and controlling the risks to health using the hierarchy of controls.Health services are required to perform a risk assessment of respiratory hazards within their workplace to determine the likelihood of a person being exposed to a hazard. Within health services, the risk to HCWs will vary between wards, occupational tasks, and other non-clinical areas. For example, workers in emergency departments or clinical areas where airborne precautions are required will have a different risk profile to other clinical areas that do not have infectious respiratory conditions, as well as non-clinical settings (for example, office-based staff, engineering, or kitchen staff) in areas where there is no patient interaction. Not all HCWs will require the protection of a fitted respirator (P2 or N95), however those HCWs who do require this level of protection should be fit tested, and receive training in safe use, donning and doffing, and infection prevention and control, receive user seal check (fit check) training, and should routinely perform a user seal check to ensure that their fit continues to be acceptable.A risk assessment of workers’ exposure to health hazards must be undertaken by a competent person, which may include an occupational hygienist, an infection prevention and control professional, or another suitably qualified occupational health and safety professional. The risk assessment must document the control measures in place to eliminate or otherwise mitigate risks to health, so far as is reasonably practicable. Further information: [WorkSafe Victoria The Hierarchy of Control](https://www.worksafe.vic.gov.au/hierarchy-control) <<https://www.worksafe.vic.gov.au/hierarchy-control>>[COVID-19 Infection Prevention and Control Guidelines](https://www.health.vic.gov.au/covid-19-infection-control-guidelines) <https://www.health.vic.gov.au/covid-19-infection-control-guidelines>.4.2 Maintenance of a Respiratory Protection ProgramAn RPP should be established once it is identified that RPE is required as a control measure to protect HCW exposure to respiratory hazards, or as soon as reasonably practicable from the date of this document.For further information please see [RPP Program guidelines](https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program) <https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program>4.3 Appointment of a program administrator Each health service must appoint a competent person to lead its RPP. Typically, the individual is an occupational hygienist, a health and safety professional, or an infection prevention and control professional with relevant experience with respiratory protection programs.This person should be familiar with relevant Occupational Health and Safety Standards as well as the use and application of the RPE within their healthcare setting. They are responsible for ensuring that the employees of their workplace are provided with RPE and that training and education are delivered to protect workers from risks of respiratory hazards.It is essential that this person consults and works with local infection control specialists to ensure that the RPP complies with relevant infection control practices and is aligned with health service policies and protocols.The program administrator will be the first point of call for HCWs to discuss their respiratory protection, how and what equipment they are using, as well as how to dispose of and maintain their equipment appropriately.Responsibilities of the program administratorThe program administrator is responsible for administering the RPP. Accountabilities include:* identifying work areas, processes or tasks that require HCW to wear RPE and evaluating hazards
* ensuring staff are provided with appropriate RPE
* organising and/or conducting RPE training
* ensuring staff use RPE in accordance with training and these guidelines
* ensuring appropriate storage, cleaning and inspection and maintenance of RPE is undertaken
* ensuring fit testing is conducted for all HCWs who are required to wear RPE
* writing and updating the program where required
* ensuring appropriate records for the RPP are maintained.

4.4 Selection of respiratory protection equipment (RPE)Difference between surgical masks and RPEIt is important to understand the difference between surgical masks and RPE:* Single-use surgical masks are designed for use in procedures that do not require respiratory protection for the wearer from the airborne transmission pathway and can be worn continuously for up to 4 hours. Surgical masks do not prevent exposure to aerosols.
* RPE is designed to protect the wearer and prevent the inhalation of contaminated air (e.g. ‘P2 /N95 respirator’).

There are many types of RPE across a range of brands, designs and models. Manufacturing standards In Australia and New Zealand, RPE is designed to provide protection against respirable biological particles (aerosols) and are classified and marked as P1, P2 or P3, in accordance with AS/NZS 1716-2012. There are additional international standards to which RPE is designed and manufactured. These include the American N95 (NIOSH-42C FR84) and European FFP2 (EN 149-2001) standards.Respirators used for HCW protection must be registered with the Therapeutic Goods Administration (TGA) as medical devices for use in health care, surgery, clinical or medical settings. This can be confirmed by checking the TGA Australian Register of Therapeutic Goods (ARTG) listing. TGA registered devices have a 6-digit Australian Register of Therapeutic Goods (ARTG) reference number and a GMDN code which identifies if it is registered for HCW use or use by the public. Further information: [TGA website](https://www.tga.gov.au/resources/publication/publications/guidance-medicalsurgical-face-masks-and-respirator-standards-key-performance-aspects): <<https://www.tga.gov.au/resources/publication/publications/guidance-medicalsurgical-face-masks-and-respirator-standards-key-performance-aspects>>.Types of RPE RPE comes in three major forms, summarised in the figure below. All RPE is designed to filter airborne particles, but there are a variety of designs to achieve this result. The most common form used in Victorian healthcare settings is a filtering facepiece respirator (FFR). It is a requirement that RPE is fit tested to an individual, to ensure that it provides adequate protection. For information on fit testing, see section 5.

| Type of respirator | Description |
| --- | --- |
| **Filtering facepiece respirators** | * These disposable respirators are designed to form a seal around the nose and mouth. While there are a number of models and efficiency levels, in healthcare they are commonly called a P2/N95 respirator.
* Some models have exhalation valves that can make breathing out easier to help reduce heat build-up, however, these valves do not filter the air that is exhaled and are generally not recommended for use in Victoria due to the risk of unfiltered air or SARS-CoV-2 (from an infected wearer) being expelled through the exhalation valve contaminating the surrounding environment and potentially exposing other individuals. However, during situations where protecting the wearer from infected individuals is the priority, such as in a setting with confirmed COVID positive individuals, reusable respirators with no filter can provide a suitable option. An assessment would need to be made on where such respirators may be used as there will be some situations where their use is not recommended such as in sterile areas and operating theatres. Refer to: [WorkSafe Victoria](https://www.worksafe.vic.gov.au/prevention-and-management-exposure-covid-19-healthcare-and-social-assistance-industry) <https://www.worksafe.vic.gov.au/prevention-and-management-exposure-covid-19-healthcare-and-social-assistance-industry > [[1]](#footnote-2)
* Some models are fluid resistant. Where a FFR is not fluid resistant it should be worn with a full-face shield if there is a risk of exposure to bodily fluids and splashes.
 |
| **Elastomeric respirators** | * These generally reusable respirators are designed to form a seal around the nose and mouth. While there are a number of models and efficiency levels, in healthcare they should contain at a minimum an N95/P2 filter.
* Some models have exhalation valves that can make breathing out easier to help reduce heat build-up. In models that do not filter the exhaled air are not appropriate for use in health services as they do not have source control.
* Some models are fluid resistant. Where an elastomeric is not fluid resistant, it should be worn with a full-face shield if there is a risk of exposure to bodily fluids and splashes.
 |
| **Powered air-purifying respirators (PAPRs)** | * Powered air purifying respirators (PAPRs) use a blower to force air through a filter into a breathing zone of the wearer. PAPRs meeting the requirements of AS/NZS 1715 Selection, Use and Maintenance of respiratory protective equipment (or equivalent US or European standard) may be considered as an alternative form of respiratory protective equipment in some circumstances. Situations where RPE would be appropriate include increased comfort during prolonged RPE use (such as an entire shift) in a COVID streaming area, and circumstances when staff are unable to achieve a face seal (for example, due to beards or facial contours, deformity, allergy or injury).
 |

Further information can be found at [Personal Protective Equipment (PPE)](https://www.health.vic.gov.au/covid-19-infection-prevention-control-guidelines/personal-protective-equipment-ppe#41-recommended-ppe) <<https://www.heamlth.vic.gov.au/covid-19-infection-prevention-control-guidelines/personal-protective-equipment-ppe#41-recommended-ppe>>Selection of RPEThe type of RPE selected needs to be aligned with advice from the Victorian Department of Health.Guidance has been developed to help HCWs, managers and procurement staff confirm which respirators can be used in occupational settings. Refer to: [Selecting the correct P2/N95 respirator](https://www.health.vic.gov.au/publications/selecting-the-correct-p2-n95-respirator-guidance-for-healthcare-workers) <<https://www.health.vic.gov.au/publications/selecting-the-correct-p2-n95-respirator-guidance-for-healthcare-workers>>. Consider also the following: * medical evaluation of wearers for psychological and physical suitability
* human factors including comfort, compatibility with other PPE, vision, communication etc
* effective fit
* maintenance requirements, if any, including cleaning, disinfection and availability including of spare parts
* disposal requirements.

Each health service’s RPP must outline the type(s) of RPE to be used at the workplace and when they are to be used. This information must be clearly signposted on noticeboards and/or in procedures for workers to reference.Facial hair needs special consideration as even stubble can cause leaking around seals of RPE (see Section 5.4)4.5 Medical evaluationThere is the potential for RPE to cause physical and psychological stress to users. Where an individual HCW identifies as having a condition which may be impacted by the use of RPE, they should be assessed to determine whether it is safe for them use to RPE.Physiological considerations include whether they have any cardiac or respiratory conditions, especially for prolonged use or heavy work. Psychological considerations include claustrophobia, anxiety, or isolation. Training can be given to help users overcome these concerns. 4.6 Education and trainingEducation and training are essential components of minimising HCW’s exposure to respiratory hazards. Where RPE is to be used, education and training must be provided by a competent person on its safe use and the limitations of the RPE selected. This training should be provided routinely with training provided to users when they are required to use new and/or different forms of RPE (including different brands, models etc.).Training must:* be provided prior to the commencement of use of the RPE, or as soon as reasonably possible
* name the work areas and/or tasks where RPE is required
* explain the type of RPE for use
* explain the importance of proper fitting
* demonstrate how the RPE is to be donned / doffed and disposed of
* demonstrate a fit check
* explain the limitations of the RPE selected
* describe maintenance and storage requirements (if relevant)
* be repeated regularly, e.g. at least annually
* improve supervisor’s knowledge of RPE, so they can ensure that RPE is used effectively by staff under their management.

Training principles:* Training can be provided in any format that the program administrator deems appropriate and suitable for their place of work.
* Training must be completed in a way that is comprehensible for HCWs. This means that the training should be tailored specifically for workers to best understand the content based on their general education and background.
* Workers are expected to be able to demonstrate knowledge of proper use of RPE. This can be done through reviewing training either orally or in writing and by reviewing HCW use in a safe and controlled environment.
* User seal check (fit check) training should be undertaken annually.

Training should occur regularly, and additional training provided where there are changes in the workplace, type of respirators made available, or any other situation where retraining appears to be required to ensure safe use of RPE.Additional resources:[How to put on (don) and take off (doff) your PPE](https://www.health.vic.gov.au/covid-19/how-to-put-on-don-and-take-off-doff-your-ppe) <https://www.health.vic.gov.au/covid-19/how-to-put-on-don-and-take-off-doff-your-ppe>Additional PPE resources including guidelines , fact sheets and poster are available on the infection and prevention resources- COVID-19 tile under the PPE tab [Covid-19-infection-prevention-control-guidelines](https://www.health.vic.gov.au/covid-19-infection-prevention-control-guidelines)<<https://www.health.vic.gov.au/covid-19/infection-prevention-control-resources-covid-19>>Training for health care workers in all settings covering the fundamentals of IPC for COVID-19 is available from the Australian Government Department of Health website [online-training-modules](https://www.health.gov.au/resources/publications/covid-19-infection-control-training-online-training-modules?language=en): <https://www.health.gov.au/resources/apps-and-tools/covid-19-infection-control-training>. IPC training suitable for non-clinical staff is available from VICNISS - Infection Prevention and Control eLearning Modules [https://www.vicniss.org.au/resources/infection-prevention-and-control-elearning-modules/VICNISS- Infection Prevention and Control eLearning Modules](https://www.vicniss.org.au/resources/infection-prevention-and-control-elearning-modules/)< https://www.vicniss.org.au/resources/infection-prevention-and-control-elearning-modules/>Training to support organisations in meeting the requirements of the National Safety and Quality Health Service Standards, the National Safety and Quality Primary and Community Healthcare Standards and to assist in implementing effective IPC practices is available from the [Australian Commission for Safety and Quality in Healthcare (ACSQH) National Hand Hygiene Initiative Learning Management System (southrock.com)](https://nhhi.southrock.com/cgi-bin-secure/Home.cgi). <https://nhhi.southrock.com/cgi-bin-secure/Home.cgi>4.7 Use of RPEUsers must ensure that RPE is used in accordance with manufacturer’s instructions and current departmental guidelines. It is important that HCWs consider the following when using RPE:* Avoid touching RPE (such as readjusting) to ensure a safe and secure fit at all times.
* If the RPE needs to be touched, ensure a fit check is conducted (see Section 5.7) and that hand hygiene is performed before and after.
* RPE should only be touched at the straps or harness and not worn around the neck. A face shield may be worn over RPE for eye protection.
* Wearers must be clean shaven every time close fitting RPE is required to be worn.
* All HCWs must remove and dispose of RPE before going on a break and replace RPE before resuming work.
* Upon removal of RPE, HCWs must always perform hand hygiene and should remember to hydrate themselves.
* Reusable RPE must be maintained according to manufacturer instructions and routinely cleaned and disinfected in line with local infection prevention and control policies.

HCWs must be made aware that wearing RPE can result in detrimental effects to both the user and the performance of their role. This includes negative impact on communication, skin irritation, reduced field of vision, musculoskeletal strain on face, neck and shoulders etc.**Associated health issues****PPE-related facial injuries -** Where tight-fitting RPE may be required, especially for extended periods of time or on a regular basis, this may lead to pressure injuries. Pressure injuries are any breach of skin integrity caused by unrelieved pressure on soft tissue that has been compressed. Injury to the sealed contact area of RPE may not be fully avoidable, however the severity of injury can be minimised and managed in several ways, including:* ensuring RPE is only used when required
* keeping skin clean and hydrated
* maintaining good skincare practices – moisturising regularly and avoiding harsh chemical solutions (e.g. alkaline soaps/cleanser, irritant chemical solutions) moisturise using pH balanced products

Workers should always perform a user seal check (fit check) after adjusting or replacing the RPE, and report discomfort or skin injury arising from their RPE to their supervisor and seek a medical assessment and referral to a dermatologist f an allergic reaction to PPE occurs.Further information: [Caring for skin when wearing PPE](https://www.health.vic.gov.au/covid-19/caring-for-your-skin-when-wearing-ppe) <https://www.health.vic.gov.au/covid-19/caring-for-your-skin-when-wearing-ppe>**Hydrocolloid or foam dressings**A thin hydrocolloid or foam dressing can be placed on facial pressures caused by PPE. Dressings may reduce the risk of respirators. Fit testing should be repeated with any dressing in place. Further information: [Personal Protective Equipment](https://www.health.vic.gov.au/covid-19-infection-prevention-control-guidelines/personal-protective-equipment-ppe) <https://www.health.vic.gov.au/covid-19-infection-prevention-control-guidelines/personal-protective-equipment-ppe>**Controlling heat stress while wearing PPE**Wearing PPE in hot weather may laed to heat stress. The individual and the employer should minimise the risk of developing a heat related illness. In the relation to the wearing of a N95/P2 respirator, regularly check for moisture due to sweating and for signs of pressure injuries.4.8 Maintenance It is recommended that most RPE utilised in Victorian health services is single use FFR. For RPE that is not single use, it is essential that HCWs are provided with the necessary tools and equipment to clean, disinfect, and ensure equipment is operationally effective. To do this, a system of RPE care and maintenance should be implemented as part of the RPP. A system must be established so that RPE is:* Maintained and inspected in accordance with manufacturer’s instructions to ensure they function and fit correctly. This includes:
	+ A thorough visual inspection for cleanliness and defects as well as a fit check to ensure a proper fit can be achieved.
	+ Examination of the facepiece, valves (where applicable), head straps, filters/cartridges and air supply systems for breakages, distortion, cracks, residue or dirt as well as any applicable hoses and/or connections.
	+ Taking out of circulation for repair or disposal if they cannot be properly maintained.
* Cleaned and disinfected in accordance with local infection control and prevention policies at a designated respirator cleaning station in an area that is free of respiratory hazards, away from other work areas.
* Components are repaired or replaced as necessary
* Stored appropriately according to infection control protocols

4.9 Record keepingTo ensure that compliance with a RPP can be demonstrated, records should be kept that relate to:* regular evaluation of the workplace to determine the components of an RPP required
* implementation information on components of an RPP in place
* respirator fit testing schedules and results
* maintenance of reusable equipment
* training records (might include training conducted elsewhere in a workplace for example in the use of personal protective equipment more broadly)

This information should be included in health service COVID Safe plans.5. Fit testingThe effectiveness of close-fitting respiratory protection relies on achieving a seal against the wearers face. The purpose of fit testing is to verify which selected brands, models and sizes of close-fitting RPE adequately fits the wearer. Fit testing does not replace the need for HCWs to perform a user fit check every time they wear RPE. A fit check is the routine process of checking RPE achieves a good seal once it has been applied (see section 5.5).5.1 Determining when fit testing is requiredWhere HCWs are required to wear RPE, fit testing must be provided to those individuals. This includes: * prior to first use
* when a new brand/model of RPE is made available (and healthcare workers who have not previously achieved a fit to a respirator should be fit tested to a new respirator on the market)
* for all new starters in higher risk roles (including students and volunteers), or for people transferring from lower risk into higher risk roles
* A significant change to physical appearance:
	+ significant weight loss or gain (a change of more than 5 per cent)
	+ pregnancy
	+ facial trauma / surgery
	+ scarring or cosmetic surgery
	+ extensive dental work including extractions and new dentures
	+ any other reason for suspecting a mask leak, including a worker suspected of acquiring a respiratory illness at a workplace despite wearing RPE.

Where it is not possible to achieve testing and/or the recommended frequency of testing, for example during periods of high demand such as a pandemic, HCWs must as a minimum undertake a fit check. For further information, please see Repeat fit testing guidance for health service organisations, and guidance on the conventional use of PPE. [Repeat fit testing guidance for health service organisations](https://www.health.vic.gov.au/publications/repeat-fit-testing-guidance-for-health-service-organisations) <https://www.health.vic.gov.au/publications/repeat-fit-testing-guidance-for-health-service-organisations>[Personal Protective Equipment (PPE) specific recommendations for COVID-19](https://www.health.vic.gov.au/ppe-specific-recommendations-covid-19) <https://www.health.vic.gov.au/ppe-specific-recommendations-covid-19>The Department may issue Pandemic or Emergency orders which will influence how health services should employ their infection prevention and control measures, and their RPP. Health services should closely monitor the advice in these circumstances. 5.2 Identification of employees for fit testing Conducting fit testing requires specific equipment and training (see section 5.3 and 5.5). Organisational guidelines on the use of facial protection should be consistent with current jurisdictional and national guidance, which may include government directions, Victorian Department of Health or Commonwealth Department of Health and Aged Care guidance.Employers must identify the level of risk to the health of employees from exposure to hazards such as COVID-19 at their workplace and must be done in consultation with health service representatives (HSRs) and employees, so far as is reasonably practicable.Employers must ensure that employees receive the necessary information, instruction, training or supervision to enable them to do their jobs safely, this includes for any risk controls that are implemented.Employers are responsible for: * completing a risk assessment that identifies staff who require P2/N95.respirators
* ensuring users of respirators undergo AS/NZS 1715:2009 approved fit-testing. Either qualitative or quantitative methods are valid and appropriate
* providing education and training on the safe and appropriate use of selected PPE.

Employees are responsible for: * using PPE as instructed by the employer
* reporting any damage, defects, or malfunctioning PPE
* reporting any physical or medical limitations that may impact their ability to safely wear PPE.

Health services should align their respiratory protection and control strategies to the hierarchy of controls approach to risk.

|  |  |
| --- | --- |
| **Hierarchy of controls** | Examples of IPC strategies |
| **Administrative** Implementation of policies and protocols to guide practices that reduce risk.  | Implement policies such as: * Vaccination programs
* Respiratory protection programs
* Standard and transmission-based precautions procedures
* Surveillance
* Physical distancing
* Education and training
 |
| **Personal protective equipment** Worn to protect the wearer from infection.  | Use transmission-based precautions Use PPE (masks, respirators, gowns, gloves, and eye protection)  |

 Hierarchy of controls and infection control strategies to reduce COVID-19 transmission can be found at [IPC Control Strategies](https://www.health.vic.gov.au/covid-19-infection-prevention-control-guidelines/ipc-control-strategies) <https://www.health.vic.gov.au/covid-19-infection-prevention-control-guidelines/ipc-control-strategies>5.3 Fit testing methodologyIn Victoria, it is preferred that quantitative fit testing is conducted. Quantitative fit testing requires the use of specialised particle counting equipment (such as a PortaCount™ Plus machine) to provide quantitative, or numerical, measurements of the amount of face seal leakage present when a given RPE model is donned by a particular user. It is recommended that fit testing be undertaken using FFR only. Where a HCW can’t fit any available FFR a decision should be made as to how to remove them from risk of respiratory hazards. Efficiently and effectively undertaking quantitative fit testing involves the following elements:* Persons who perform fit testing have undergone training to be competent to do so.
* Workers to be tested are scheduled according to risk (see section 5.2).
* Appropriate infection control procedures are followed (see section 5.8).
* A minimum of 3 FFR make/models are tested, to ensure options are available for a worker.
* Information on worker demographics and test results are securely recorded(see section 5.9).
* Advice is available for workers after testing to translate their results into practice, for example what is available for them if a successful fit was not achieved on any FFR (see section 5.10)
* A designated person is nominated to ensure that fit testing equipment is used and maintained correctly as per the manufacturer’s instructions by a trained operator.

Organisations may wish to partner locally to ensure a fit testing service is continually available where it is impractical to maintain their own service, for example between health services, aged care, and community-based organisations.Qualitative fit testing as an alternative method to quantitative fit testing is **not recommended** for healthcare workers in healthcare settings. For further information about fit testing protocols, please see [Respiratory Fit Testing Protocol Guide](https://www.health.vic.gov.au/publications/respiratory-fit-testing-protocol-guide) <https://www.health.vic.gov.au/publications/respiratory-fit-testing-protocol-guide> <https://www.health.vic.gov.au/publications/respiratory-fit-testing-protocol-guide>5.4 Facial hair Fit testing is an important protection measure for healthcare workers who wear P2/N95 masks on a daily basis. Facial hair interferes with the seal of close-fitting respiratory protection thereby significantly reducing the effectiveness of the device. Current international standards require that fit testing must not occur on an individual who has facial hair present. Discussions should be held with HCWs regarding remaining clean shaven or changing the type of RPE to avoid seal issues with facial hair. These conversations should acknowledge that some HCWs may have facial hair for religious, cultural, or medical reasons and they are unable to shave. The primary recommendation for all healthcare workers for achieving a fit-testing seal, with a tight-fitting respirator, requires a clean-shaven face. A research trial is currently underway to evaluate the Singh Thattha technique for HCWs who are unable to shave due to religious, cultural, or medical reasons. The Singh Thattha technique involves using a beard cover technique to cover the entire beard, chin, and cheeks by using an elastic band over the beard and tied at the top of the head. The respirator is then worn with the seal formed on the band. The Department of Health is also supporting an Implementation study based on the initial trial to assess the feasibility, and acceptance and ongoing roles and responsibilities of implementing the Singh Thattha technique in selected Victorian health services. HCWs who are unable to be clean shaven and be fit tested due to a religious, cultural, or medical reason are invited to contact the Royal Melbourne Hospital Respiratory Protection Program to discuss the potential for participating in the study. Please email respiratoryprotectionprogram@mh.org.au to register in study. Those wishing to participate in the study must seek approval from the health service at which they are employed, volunteering or completing a clinical placement as part of their studies. Further information: [Victorian Respiratory Protection Program – Fit testing guidelines: Supporting Healthcare Workers who are unable or unwilling to be fit tested](https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program) <<https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program>>5.5 Competency of fit testersWhen undertaking fit testing it is important that health services ensure that they have the required expertise available to ensure the results of the testing can be trusted. This may require health services to seek specialist providers to assist them in implementing the testing.All persons who perform fit testing must be competent to do so. No matter the tight-fitting respirator brand, there must be confidence that a true indication of fit (or lack of fit) has been achieved through a validated methodology and protocol by a competent person. A competent person may be an occupational hygienist, another type of health and safety professional, an internal employee who has undertaken appropriate training or an external fit test service provider. AS/NZS 1715 and ISO 16975-3 should be used for determining whether a person is considered competent. ISO 16975-3 provides detailed guidance of the knowledge and practical skills that fit test operators should have. Health services can contact the Australian Institute of Occupational Hygienists (AIOH) for further information.A sample fit tester Position Description and competency tool can be found within the [Victorian Respiratory Protection Program factsheets](https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program) <https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program>5.6 Fit-testing students on clinical placement Health services and Ambulance Victoria have overarching responsibility for the occupational health and safety (OHS) of students undertaking clinical placements,Where there is a need for students on clinical placement to wear P2/N95 respirators, students should be fit-tested, either prior to commencement, as part of their onboarding process, or as soon as possible upon commencing their clinical placement by the health service or Ambulance Victoria at which the placement is occurring. Health services and Ambulance Victoria should prioritise student fit testing alongside that of other healthcare workers using a risk assessment approach, in line with their existing Respiratory Protection Plans. As a prerequisite to undertaking clinical placement within Clinical Placements Providers (CPPs), which are health services, university and VET education providers should provide basic education and training on correct use of PPE (including donning/doffing, fit check practices and mask disposal) to their students. This is to ensure students are familiar with basic PPE requirements and fit checking concepts and processes prior to commencing placements.Students should be provided with written evidence of the completion of a fit test, irrespective as to whether the fit test is administered by the CPP which is a health service, the education provider or a third-party provider.Written evidence should take the form of a fit test certificate or card, verifying the date of the fit test and the recommended respirator make/model specific to the individual student. It is suggested that students save a photo of their fit test to their smart phone or tablet to ensure they have a back-up record for future reference. Several data-fields have also been built within the Placeright system to record fit testing completion. Data-entry is accessible to both CPPs and EPs. At the individual student level, information may be recorded as to the:(i) date of fit test completion,(ii) location/provider of fit test, and(iii) recommended respirator make/model (i.e. drop-down menu with option of free text entry).5.7 Fit checkingFit checking is the process of evaluating the seal of a P2/N95 respirator at point of use. HCWs must perform a user seal check every time they put on close-fitting respiratory protection to ensure a facial seal is achieved.The procedure for donning and fit checking a respirator includes:* place the respirator on the face so the top rests on your nose and the bottom is secured under your chin.
* place the top strap or ties over the head and position it high on the back of the head.
* pull the bottom strap over your head and position it around your neck and below your ears.
* place fingertips from both hands at the top of the nosepiece. Using two hands, mould the nose area to the shape of your nose by pushing inward while moving your fingertips down both sides of the nosepiece.
* Ensure the head straps and respirator edges around the facial seal are not twisted, wrinkled or folded.
* check that the respirator has a negative pressure seal by covering the filter with both hands or a non-permeable substance (for example, plastic bag) and inhaling sharply. If the respirator is not drawn in towards the face, or air leaks around the face seal, readjust the respirator and repeat process, or check for defects in the respirator.

Always refer to the manufacturer’s instructions for fit checking of each brand or type of P2/N95 respirator.5.8 Infection controlIt is imperative that relevant infection control procedures are followed throughout the fit testing process. This includes appropriate donning/doffing procedures, cleaning, and disposal protocols for equipment. The program administer should ensure that they work in consultation with local infection control practitioners to ensure that the RPP is aligned with local infection control protocols and procedures. All reusable equipment must be cleaned and disinfected before use on the next person following manufacturer’s instructions and organisational procedures. 5.9 Data, reporting and record keeping of fit testingData should be captured and recorded on each individual who undergoes fit testing. This should include worker name or identification number, the date of the test and specifics of the respirators tested (including make, model, if a clip was used etc). Results are ideally recorded with a specific measure achieved and a yes/no pass result. Additional demographic data are useful to predict supply requirements into the future. This includes information such as gender, date of birth, ethnicity and weight. Each health service is required to have an internal reporting and record keeping system. Further information on the format of fit test results to provide to healthcare workers is outlined in [Transferability of fit testing records](https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program) < https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program>If data is required to assess the suitability of a new P2/N95 respirator, health services may be requested to fit test healthcare workers and provide the fit test data to the relevant departmental team. This will assist with any future purchasing decisions.5.10 Support following fit testingImmediately following fit testing, workers should be offered support to interpret their results and how it may impact on their working arrangements. Common areas of advice include: * Reassurance that the make/model of respirator a worker requires is available for their use
* Reminder of fit checking protocols to ensure a respirator is fitting at each wear, and what to do if it doesn’t
* Discussion on a process of identifying alternative respirator or work arrangements if a worker is unable to achieve a fit with any respirator available at the time of testing. Depending on the role and the current public health directions, suitable alternatives may include:
* facilitating the ability to work from home
* offering hypo-allergenic masks
* trying different brands of masks (different materials and chemicals used in manufacturing process)
* redeployment to alternative duties that are not public-facing or do not involve working in a shared space.

6. Relevant informationThis Standard provides information on general principles of respiratory protection for workers and supports the following legislation and standards.Australian/New Zealand Standards* Standards Australia AS/NZS 1715:2009 - Selection, use and maintenance of respiratory protective equipment
* Standards Australia AS/NZS 1716:2012 - Respiratory protective devices
* Standards Australia AS 4381:2015 - Single-use face masks for use in healthcare

[Victorian Infection prevention control guidelines: COVID-19](https://www.health.vic.gov.au/covid-19-infection-control-guidelines) <https://www.health.vic.gov.au/covid-19-infection-control-guidelines>* Recommends that where there is a high probability of airborne transmission due to the nature of the infectious agent or procedure then a correctly fitted P2/N95 respirator should be worn.

Occupational Health and Safety Act 2004The *Occupational Health and Safety Act 2004* (OHS Act) is the main workplace health and safety law in Victoria. It sets out key duties, principles and rights about occupational health and safety. The Occupational Health and Safety Regulations 2017 (OHS Regulations) build on the OHS Act. They set out how to fulfil duties and obligations and in particular processes in relation to a limited list of hazards, that support the OHS Act. Adherence to these guidelines forms part of the development of a safe system of work, however, adherence with this plan does not mean an employer, self-employed person, or employee has fully complied with all their duties under the OHS Act and OHS Regulations. In addition to adhering to this RPP standard, employers, self-employed persons and employees must ensure they comply with all obligations under the OHS Act and Regulations. Information on obligations can be found at [Worksafe](https://www.worksafe.vic.gov.au/coronavirus-covid-19) Victoria < <https://www.worksafe.vic.gov.au/coronavirus-covid-19/>>.Further resources[WorkSafe Victoria: Face masks in the workplace](https://www.worksafe.vic.gov.au/managing-coronavirus-covid-19-risks-face-masks-workplaces)< https://www.worksafe.vic.gov.au/archived-managing-covid-19-risks-face-masks-workplaces> [The WorkSafe Victoria - Managing COVID-19 risks: healthcare and social assistance industry – Respiratory Protective Equipment (RPE) refers in the section: Additional considerations for wearing and fitting of N95/P2 respirators:  make sure that they are clean-shaven where the N95/P2 respirator touches the face](https://www.worksafe.vic.gov.au/managing-covid-19-risks-healthcare-and-social-assistance-industry-respiratory-protective-equipment) <https://www.worksafe.vic.gov.au/managing-covid-19-risks-healthcare-and-social-assistance-industry-respiratory-protective-equipment> [Victorian Respiratory Protection Program resource page](https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program) <https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program>Preventing and managing the increased risk of employee fatigue in healthcare during COVID-19<https://www.worksafe.vic.gov.au/preventing-and-managing-increased-risk-employee-fatigue-healthcare-during-covid-19>To receive this document in another format, phone using the National Relay Service 13 36 77 if required, or email Victorian Respiratory Protection Program <vicrpp@health.vic.gov.au>Authorised and published by the Victorian Government, 1 Treasury Place, Melbourne.© State of Victoria, Australia, Department of Health, 26 June 2023. ISBN 978-1-76096-942-4 (pdf/online/MS word) Available at the Victorian Respiratory Protection Program page on the Health.vic website <https://www.health.vic.gov.au/quality-safety-service/victorian-respiratory-protection-program> |

1. [↑](#footnote-ref-2)