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| Respiratory Fit Tester – Sample Position Description and Competency Tool |
| A resource for health service organisations who perform respiratory fit testing of healthcare workers21 January 2022 |

## Updates

To ensure you are aware of the most recent changes, all content updates and the date the document was last updated will be highlighted in yellow text.

# Introduction

Since the onset of the global COVID-19 pandemic, the significance of respiratory protection to mitigate the spread of disease has been highlighted, particularly for those who work in health service organisations. By the nature of their work, healthcare workers (HCWs) are placed at a much greater risk than others in the population of encountering microbiological respiratory hazards such as COVID-19, tuberculosis (TB), and seasonal influenza. It is this high-risk workplace environment which emphasises the need for HCWs to participate in respiratory fit testing to ensure that they have the training and support required to wear RPE safely and effectively.

To ensure that respiratory fit testing is performed correctly and reliably, it is necessary for health services and other organisations providing fit testing for HCWs to employ respiratory fit testers who possess the necessary knowledge, understanding and skills.

This guidance informs health service organisations and RPP administrators on the core knowledge and skills are that a fit tester should demonstrate proficiency in to effectively undertake their role as a respiratory fit tester for HCWs. The guidance also identifies additional personal qualities that have been shown to be important for the successful implementation of a fit testing program.

**Please note: This document is intended to act as a guide for health service organisations and is not intended to define employment criteria or level of competency.**

# Respiratory Protection Program – Fit Tester

### Position summary

Working under supervision of the RRP manager, or RPP lead, the fit tester will be responsible for assisting with the implementation of the organisation’s RPP. Primarily, the fit tester will conduct respiratory fit testing of all staff who are required to wear RPE.

Key administrative features of the fit testing role include preparing for, and conducting fit testing, providing tailored advice, problem solving, cleaning, inspection and maintenance of RPE, the provision of instructional demonstrations and advice on the monitoring of respiratory hazards for HCWs.

The fit tester will be expected to work in a manner consistent with the organisation’s mission, values, and vision.

## Professional background

Respiratory fit testers are not drawn from a particular profession. The following list provides examples of common roles and professions that a fit tester may be drawn from but does not preclude persons from other professions and roles applying. Some health services may prefer persons from a clinical background.

* Occupational hygienists
* Registered health practitioners such as registered and enrolled nurses, physiotherapists, paramedics, medical practitioners, and allied health practitioners
* Clinical staff on light duties, or on a return-to-work program
* OH&S officer, infection control officer, environmental health officer, biomedical technician, or respiratory scientist
* Dental nurses
* Emergency services workers such as police officer, SES officer, fire brigade officer
* Military personnel
* Persons with suitable experience, in particular with personal protective equipment (PPE), respiratory protective equipment (RPE) and respiratory protective devices (RPDs)
* Current students studying occupational hygiene, nursing, OH&S, physiotherapy, environmental health, etc.
* Staff who have completed appropriate training and assessments in fit testing.

### Qualifications and training

Occupational Safety and Health Administration (OSHA) doesn't require certification to perform fit tests. However, the OSHA standard does specify that fit test administrators should know how to conduct a test, recognise invalid results, and properly clean and maintain equipment. <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppA>

Respiratory fit testers will have a strong understanding of the principles of quantitative (and qualitative) fit testing methodology and its application in a healthcare setting. They should have a good understanding of the use of Personal Protective Equipment (PPE) and Reusable Protective Devices (RPDs) in airborne precautions and the fit checking process.

Completion of a suitable fit testing education or training program is desirable. The Australian Institute of Occupational Hygienists (AIOH) offers the RESP-FIT course. Healthshare Victoria has an approved panel of fit test providers that offer a range of fit testing services, including training.

It is expected that a fit tester will receive support and preceptorship from an experienced fit tester prior to commencing fit testing independently.

Training will have included a mix of theoretical and practical elements.

### Key accountabilities, skills, and knowledge

* Demonstrated understanding of respiratory protection principles, fit testing methodology and the role that RPE plays in minimising the risk of respiratory hazards
	+ Demonstrated understanding of potential respiratory hazards for HCWs such as COVID-19 and TB
* Familiarity with relevant standards, protocols, legislation, and guidelines and any changes in legislation impacting respiratory protection:
	+ International standard: ISO 16975-3:2017(E) Respiratory protective devices – Selection use and maintenance – Part 3 Fit-testing procedures
	+ Australian / New Zealand standard: AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment
	+ Australian / New Zealand standard: AS/NZS 1716:2012 Respiratory protective devices
	+ OSHA 1910.134 Appendix A Part I. OSHA Accepted Fit test Protocols
	+ OH&S Act (2004) and OH&S Regulation (2017)
* Demonstrated practical ability to conduct fit tests including setting up, calibrating, daily checks, maintaining and troubleshooting equipment:
	+ Can identify fit testing equipment components and accessories
	+ An ability to check equipment for wear and damage
	+ Demonstrated ability to operate fit testing software
	+ Complies with manufacturer’s guidelines
* Demonstrated knowledge relevant to fit testing of facial and respiratory anatomy and physiology:
	+ An understanding of what factors may play a role in successful and failed fit testing, such as facial hair and anatomy
	+ Knowledge of factors that may influence the frequency of fit testing such as weight loss/gain and other changes to facial anatomy; suspected respiratory disease acquired at work despite wearing RPE
* Understanding of correct donning and doffing technique of PPE and RPE:
	+ Ability to provide education and instruction to HCWs on correct donning, doffing and sequencing of tier 2 and 3 PPE
	+ Have a good understanding of the fit check process and be able to educate HCWs to use correctly each time after donning a respirator
* Understanding of infection prevention and control measures:
	+ Cleaning and disinfection of fit test equipment (as per published department or manufacturers or health services infection control guidelines)
	+ Understand modes of pathogen transmission including airborne and fomite transmission
* Ability to apply knowledge for correct selection of P2/N95 respirators available to Victorian HCWs and demonstrated ability to identify likely causes of a failed test and troubleshoot
* Demonstrate a commitment to ongoing professional development, education, and training
* Willingness to undergo competency assessment as required by the organisation.

### Key selection criteria

* Communication skills: Demonstrates an ability to communicate effectively to a multi-disciplinary healthcare workforce; demonstrates cultural awareness, particularly in relation to cultural/religious beliefs that may affect fit testing; be able to explain the fit test procedure, the meaning of the fit test results to wearers and support staff and managers to make decisions following test results. Written communication skills are also essential to be able to maintain records and prepare reports.
* Ability to work independently, be flexible, proactive, problem solve and meet relevant organisational goals and targets
* Ability to effectively collaborate and communicate with teams and other business units within the organisation
* Display integrity and accountability
* Ability to maintain a safe working environment for self and others: Advocate for a culture of respiratory safety within the organisation, continuous improvement and be able to wear PPE for extended periods
* Proficient in a range of computer applications
* Possess strong data analysis, documentation, reporting skills and understanding of confidentiality requirements

# Annual refresher training / competency assessment

Fit testers should undertake an annual competency or refresher training to ensure their ongoing ability to reliably perform fit testing, to demonstrate adherence to fit testing procedures and protocols, and to demonstrate an ability to operate the equipment and maintain infection prevention and control standards. Different methodologies for delivering content and assessment maybe deployed.

An annual competency assessment should involve both a theoretical component and practical demonstration of the fit testing procedure performed on a fit testing volunteer. A sample fit testing competency assessment tool can be found in *Appendix A*.

Additional fit tester competency assessments should be considered when:

* New fit testers are employed by the organisation. This may be included as part of ‘new starter’ or ‘onboarding’ programs and should ideally be undertaken within one to three months of new appointments.
* Trends in fail/success rates significantly change for a fit tester. Changes in trends may be an indicator that procedures or protocols have not been adhered to or work practices have declined over time.

# Resources

### **Examples of evaluation form for competent fit testers**

*Appendix A* - This document provides an example of a fit tester competency tool specific for HCWs utilising the quantitative fit testing methodology. This tool can be used as provided or adapted to a health service’s specific requirements.

*Annex A* from [ISO 16975-3:2017](https://www.iso.org/standard/64513.html) provides an example of an evaluation form for competent fit testers. Whilst the example form also covers qualitative testing methodology which is a methodology unlikely to be utilised for fit testing HCWs, the form does remain a valuable resource to assist health services develop their own annual competency for fit test operators.

The [AIOH](https://www.aioh.org.au/) and their fit test training website, RESP-FIT, have further information and resources: [respfit.org.au/](https://respfit.org.au/)

The [AIHA University](https://www.aiha.org/education/frameworks/technical-framework-resource-respiratory-protection-programs) Technical Framework – *A resource for Respiratory Protection Programs*, is another resource for developing an annual competency for fit testers.

The Victorian Department of Health [bewell.besafe](https://www2.health.vic.gov.au/health-workforce/worker-health-wellbeing/be-well-be-safe/protective-personal-equipment-ppe) website provides further information and guidance on PPE including donning and doffing advice.

# References

American Industrial Hygiene Association, AIHA University Frameworks, Technical Framework: A Resource for Respiratory Protection Programs, 2020, <https://www.aiha.org/education/frameworks/technical-framework-resource-respiratory-protection-programs>

Australian Institute of Occupational Hygienists, Resp-Fit Respirator Fit Testing Training and Accreditation Program, <https://respfit.org.au/> (cited December 2021)

Australian / New Zealand standard: AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment

Australian / New Zealand standard: AS/NZS 1716:2012 Respiratory protective devices

Health and Safety Executive, [www.hse.gov.uk/respiratory-protective-equipment](http://www.hse.gov.uk/respiratory-protective-equipment) / (cited July 2021)

International standard ISO 16975-3 (2017) Respiratory protective devices – Selection use and maintenance – Part 3: fit-testing procedures

Kinnect Training, Respirator Fit Test Training Learner Guide, 18 Dec 2020

NHS, NHS England and NHS Improvement coronavirus, [www.england.nhs.uk/coronavirus/secondary-care/infection-control/ppe/ffp3-fit-testing/](http://www.england.nhs.uk/coronavirus/secondary-care/infection-control/ppe/ffp3-fit-testing/) (cited July 2021)

United States Department of Labour, OSHA 1910.134 Appendix A, <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppA> (cited January 2022)

RPA: The face-fit specialists, 2021, [www.face-fit.co.uk](http://www.face-fit.co.uk) (cited July 2021)

# Appendix A

**Sample Fit Test Operator Competency Tool for Novice and Advanced Fit Testers of HCWs testing disposable N95 / P2 half-face respirators**

Failure to demonstrate particular skills or knowledge does not necessarily determine whether a fit test operator is not competent to perform fit testing. Health services will need to consider a range of factors in determining competency. Formal or informal education and training should be provided where skills and knowledge are not demonstrated. Where a fit tester is determined to be not competent, formal refresher training should be considered.

|  |  |  |  |
| --- | --- | --- | --- |
| **Fit Tester’s Name** |  | **Date** |  |
| **Assessor’s Name** |  | **Worksite** |  |
| **Fit Test Method**  | **Quantitative (recommended)** [ ]  | **Qualitative** [ ]  |
| **Outcome** | **Competent** [ ]  | **Not Competent** [ ]  **(refer assessor comments for action)**  |
| **Assessor Comment (Optional):** |

| **Key Skills and Knowledge** | **Demonstrated** | **Not Demonstrated** |
| --- | --- | --- |
| 1. **Principles of Fit Testing; Its Role, Purpose and General Knowledge**
 |  |  |
| Describes what fit testing is and can explain the different methodologies including qualitative and quantitative testing and describe their limitations. * Understands that the recommended methodology for fit testing HCWs is quantitative
* Demonstrates an understanding of ambient aerosol condensation nuclei counting (CNC)
* Understands the importance of performing a fit check (user seal check)
* Understands the capabilities and limitations of CNC and QNT methodology
 |  |  |
| Can describe the purpose and importance of fit testing HCWs.* Demonstrates knowledge of which HCWs are required to undertake fit testing
* Demonstrates an understanding of the consequences of occupational expose to respiratory hazards for HCWs.
* Understands the principles of the priority workforce
 |  |  |
| Demonstrates general knowledge of the ‘Hierarchy of Controls’ |  |  |
| Can identify potential respiratory hazards for HCWs and demonstrates knowledge of modes of pathogen transmission and routes of entry for respiratory hazards and how RPE can protect against transmission. |  |  |
| **Advanced/Supervisor level:** |  |  |
| Demonstrates strong knowledge of the ‘Hierarchy of Controls’ |  |  |
| Understands where fit testing sits within the health service’s respiratory protection program (RPP) and can describe the key components of the RPP. |  |  |
| 1. **Understands the Legislative Framework**
 |  |  |
| Understands that there are multiple accepted international fit testing protocols and adheres to the health service’s selected fit testing protocol and is aware that the modified OSHA CNC Quantitative protocol is accepted for use within Victorian health services. Is familiar with the following legislation, protocols, and standards:* [ISO 16975-3:2017(E) Respiratory protective devices – Selection use and maintenance – Part 3 Fit-testing procedures](https://www.iso.org/standard/64513.html)
* [Australian / New Zealand standard: AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment](https://www.standards.org.au/standards-catalogue/sa-snz/publicsafety/sf-010/as-slash-nzs--1715-2009)
* [Australian / New Zealand standard: AS/NZS 1716:2012 Respiratory protective devices](https://www.standards.org.au/standards-catalogue/sa-snz/publicsafety/sf-010/as-slash-nzs--1716-2012)
* [OSHA 1910.134 Appendix A Part I. OSHA Accepted Fit test Protocols](https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppA)
	+ OSHA modified CNC Quantitative test
* Relevant Occupational Health and Safety legislation
* Relevant infection prevention and control standards and guidelines
* Local health service policies relevant to fit testing
 |  |  |
| Can explain what the different protection factors are including:* Overall fit factor
* Workplace protection factor
* Required minimum protection factor
* Assigned protection factor
 |  |  |
| Explains the required fit factor to be used as a pass by the health service |  |  |
| Understands the importance of infection prevention and control measures and demonstrates:* Handwashing by the fit tester and HCW before and after the test, and when otherwise indicated
* Correct disposal of single use equipment
* Cleaning and disinfecting reusable equipment and the surrounding environment
* Adheres to local infection prevention and control policies and procedures
 |  |  |
| **Advanced/Supervisor level** |  |  |
| Contributes to the RPP through policy and procedure development |  |  |
| Can describe key elements of relevant legislation |  |  |
| Ensures fit testers have undertaken suitable training and competency assessment |  |  |
| 1. **Understanding of the Role and Selection of RPE, and Fit Testing Considerations**
 |  |  |
| Can describe the key elements of the respiratory system and its physiology, and how occupational exposure to respiratory hazards may affect it. |  |  |
| Can describe the key anatomical facial features that relate to fit testing and how they may impact on the creation of a seal between the wearers face and the respirator. |  |  |
| Understands and can explain how the presence of facial hair may impact the fit testing process.* What type of facial hair may affect the fit testing result
* Does not commence test if facial hair that may affect the test is present
 |  |  |
| Demonstrates an understanding of how other PPE required to be worn by HCWs can impact on the respirator seal and how to manage and include relevant PPE in the fit testing process. |  |  |
| Demonstrates knowledge on the available range of P2 and N95 RPE utilised by the health service including make, model, style, and size of RPE. |  |  |
| Uses sound judgement when selecting suitable RPE for the wearer by considering the availability of RPE, and the HCWs:* Role in the organisation
* Types of activities likely performed by the HCW
* Facial characteristics such as size, shape, and prominent features
 |  |  |
| **Advanced/Supervisor level:** |  |  |
| Liaises with procurement and other departments regarding the availability of respirators |  |  |
| 1. **Fit Testing Procedure – Quantitative CNC Test**
 |  |  |
| Evaluates HCW being tested and can identify when the test should not proceed such as:* The HCW has a physiological or psychological condition that will impact on the fit test
* Presence of facial hair or other interference concerns (wounds, scarring, jewellery, hair etc)
 |  |  |
| Explains the fit test purpose and procedure to the participant and completes the consent process.* Can explain what the quantitative CNC test is and how it determines the fit factor
* Confirms that HCW being tested has not smoked, eaten, chewed gum or had anything to drink for at least one hour prior to the test (water is acceptable).
 |  |  |
| Observes and assesses HCW donning PPE and RPE without assisting.* Checks the integrity of the RPE for faults or damage prior to HCW donning
* Can demonstrate correct donning and doffing of RPE as per manufacturer instructions.
* If required, provides education on correct donning technique specific to the make and model
* Educates the participant on any adjustments they should make to maximise the chances of recording a successful fit
* Provides education to correctly perform the user fit check (user seal check)
* After donning, allows time before commencing test to allow the ambient particles to be purged from the respirator and for the participant to determine that the respirator is comfortable
* Knows where to find information on usage and donning/doffing when encountering unfamiliar or new RPE
 |  |  |
| Demonstrates correct placement of the respirator probe.* Is able to mitigate the weight of the tubing affecting the seal
 |  |  |
| Prepares the fit test machine:* Connects all the connections and components as per manufacturer guidelines including the alcohol-soaked wick
* Performs calibration and daily checks and troubleshoots calibration failure
* Can navigate the fit testing software, enters details correctly and prints results
 |  |  |
| Undertakes fit test in line with approved protocols* Can operate the equipment and commences the test as per manufacturer guidelines
* Instructs the participant to perform appropriate fit testing exercises as per selected protocol and can explain why the exercises are important
* Observes that the exercises are conducted correctly and in timing by the participant
* Observes that correct doffing procedure performed by HCW and single use equipment is disposed of appropriately.
 |  |  |
| **Advanced/Supervisor level:** |  |  |
| Ensures calibration and servicing of critical equipment is performed. Understands how to arrange repairs and ordering of consumables. |  |  |
| Demonstrates an ability to troubleshoot equipment |  |  |
| Understands differences between fitted face respirators (elastomeric/PAPR etc) and demonstrates an ability to perform fit testing on them (if applicable) |  |  |
| Can recognise the physical changes to workers that may indicate a repeat fit test is required |  |  |
| 1. **Interpretation of Results, Records and Outcome Management**
 |  |  |
| Correctly interprets the fit factor data to determine if RPE has been successfully fitted or failed* Explains to the participant their overall fit testing results and how results will impact on their selection of RPE
* Educates the participant on the requirement to undertake a fit check (user seal check) every time they are required to don a P2 or N95 respirator
* Clear documentation of results and maintains required data records including:
	+ Participant name, assessor name, machine serial number, date, results, respirator makes and models passed, fit factors and other relevant information (i.e. wears prescriptive glasses, wears PPE etc)
 |  |  |
| Demonstrates an ability to troubleshoot and rectify failed test results. Awareness and knowledge of the common reason why a test may fail or need to be stopped:* Incorrect donning or faulty RPE
* Incorrect selection of RPE based on the wearers facial size, shape and features
* Poor respirator seal
* Commencing a test too quickly
* Wearer touches the respirator during a test
* Wearer avoids touching or holding the tubing
* Wearer speaks during a non-talking exercise
* Low ambient aerosol count
* Low alcohol level
* Able to advise appropriate next steps to HCW in instances where a fit test has failed
* Performs correct machine shut down procedure
 |  |  |
| Educates the participant on testing frequency and can explain the factors that may influence testing frequency such as:* Annual re-testing for relevant HCWs
* Significant weight loss/gain
* Pregnancy
* Major dental work (including the fitting of dentures)
* Following significant facial surgery
* Significant facial scarring at tor near the site of the respirator seal
 |  |  |
| **Advanced/Supervisor level:** |  |  |
| Can demonstrate strong data management and booking management skills |  |  |
| 1. **Environment Considerations and Infection Prevention and Control**
 |  |  |
| Ability to maintain a clean, safe, and suitable working environment to conduct fit testing. Demonstrates effective cleaning and disinfection of reusable equipment and the surrounding environment and follows infection prevention and control policies and procedures.* Understands that condensation within the tubing must be dry before reuse and knows how to manage condensation and moisture within the tubing
* Demonstrates appropriate disposal of single use items
* Can outline environmental considerations for fit testing location such as heating/cooling, room size, ventilation and foot traffic
* Chemical and laser safety in relation to fit testing equipment
 |  |  |
| Is aware of equipment maintenance that can be undertaken within the health service.* Can identify equipment faults that require manufacturer assistance
* Understands equipment must only be serviced or repaired by authorised personnel
 |  |  |
| **Advanced/Supervisor level**: |  |  |
| Identifies and responds to environmental issues |  |  |
| Implements RPP policy and application of relevant legislation |  |  |

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