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Personal Protective Equipment (PPE) COVID-19 outbreak supply calculator**

# June 2022

# This document is designed to be used in residential disability settings and in home support settings.

The information outlines the considerations needed to estimate the amount of PPE to be readily accessible within a disability residential setting or in home support workers. It has been informed by Health Education Collaborative consultants and disability sector insights gained during Australian COVID outbreaks, isolation, and quarantine needs.

The requirements for COVID risk levels and PPE across states and territories will vary depending on the COVID context and outbreak management requirements.

It is important for providers to check their specific Department of Health or the department responsible for the disability sector for current advice.

The Australian Therapeutic Goods Administration (TGA) approves clinical supplies for use in Australia including COVID-19 infection prevention and control Personal Protective Equipment (PPE).

Details are listed at [Protective Personal Equipment (PPE) (health.vic.gov.au)](https://www.health.vic.gov.au/worker-health-wellbeing/protective-personal-equipment-ppe)

NDS members can also access discounts from listed suppliers. Login to member resources on [COVID-19 Hub - National Disability Services (nds.org.au)](https://www.nds.org.au/covid-19-hub)

**Considerations for estimating supply**

* What is the current quarantine/isolation requirement? (Varied in length from seven to 14 days (about two weeks) depending on vaccination status of people involved. A stock of 14 days allows for this variation.
* Knowledge of vaccination status of workers and residents will influence this requirement.
* How easy is it to access a local supply?

The time it takes for a supply to get to your site needs to be taken into consideration, along with competing local needs if an outbreak was to occur in the local area.

* Activities the workers carry out. Do they involve risk of contamination from respiratory or body fluids that will increase the need to change their PPE?
* Anyone working with a COVID positive individual or someone who is at risk of being COVID positive, must change PPE before working with anyone else.
* All PPE must be removed (doffed) and correctly disposed before going on a break and replaced (donned) before resuming shift.

**Training of employees**

All workers need to be trained in donning and doffing of the PPE supplied, and know how to fit check their N95masks. This is essential for correct use of each item and preventing the spread of infection. It also ensures that the investment in the PPE supply is not wasted through ineffective donning and doffing resulting in workers furloughed for testing or with COVID-19.

Display donning and doffing posters at each site for workers in addition to their training. Examples of donning and doffing posters are available on Federal, State and Territory Department of Health websites. The links for these are included below.

**Worker PPE items**

* Full cover waterproof gowns: Gowns need to have long sleeves and cover the front and sides of worker, securing at the back.

Waterproof isolation gowns may be used for extended periods in specific cohort environments. They must be replaced if torn or contaminated with body fluids.

* N95 respirator masks: These can only be worn for a maximum of four hours. N95 masks must be TGA-approved for COVID 19 use and supply must allow for different shapes and size of workers’ faces.
* Face shield or goggles: Face shields have been consistently recommended as the most effective option in Victoria. Single-use goggles and face shields can be worn for an entire shift. These must be replaced after assisting with an aerosol-generating procedure.

Where single-use face masks, face shields or goggles are used for extended periods, good hand hygiene and sanitising should be maintained. If reusable, it must be cleaned and disinfected before reuse.

* Disposable gloves: allow for the variations in worker hand size and fit; small, medium and large and any latex allergies.

Gloves need to be changed between every participant interaction and when contaminated or torn.

For further information see the Therapeutic Goods Administration: [**TGA Regulation of Personal Protective Equipment and COVID-19**](https://www.tga.gov.au/behind-news/regulation-personal-protective-equipment-and-covid-19)

**PPE estimates of usage**

* Disability residential service estimate: Rule of thumb estimator is a complete change of PPE every four hours per support worker.
* Victorian Department of Health Infection Prevention Control Unit estimate: [FTE per week] X [hrs. per week normally 38]: [shift length normally 8 hrs.] X [PPE changes normally four to six for N95] burn rate per week

Shift breaks: All single use PPE must be doffed and disposed of. All reusable items must be cleaned and disinfected before donning can occur again.

| PPE stock supply estimate calculator | Graphic of a pair of gloves | Graphic of a long-sleeved gown | Graphic of a surgical mask | Graphic of a P2/N95 respirator | Graphic of a pair of goggles Graphic of face shield |
| --- | --- | --- | --- | --- | --- |
| Disposable gloves  (small, medium and large) | Disposable gown  - full cover long sleeve | Surgical mask  Only where permitted – refer to GOV Health requirements | P2 / N95 respirator | Eye protection  (Goggles or face shield) |
| **Per worker/per shift x 14 days**  (7 days if stock is easily accessed)  Estimate for stock for access when COVID transmission x high risk/outbreak occurs | Gloves should be swapped after every interaction- remembering you need 2 per worker per interaction.  Estimate is 15 changes per day = 30 gloves per worker per shift.  Size guide general rule: 60% medium, 15% small,  15% large,  10% extra-large per team of workers/facility, unless worker specific needs have already been identified. | 2 per shift – Change very four hours  Always have spare available for any tears or soiled gowns. | 2 x per shift to allow for changes every four hours | 2 x per shift to allow for changes every four hours  *\* Applies to any worker use not just outbreak sessions* | 1 x per shift with spare availble if damaged or soiled.  If resuable can be 1 x shift witrh appropriate cleaning supplies. |

**PPE waste disposal**

Consider your waste disposal needs and check against state or territory government requirements.

The general information below was identified through the Victorian Department of Health link to [EPA waste management COVID-19](https://www.health.vic.gov.au/covid-19/infection-prevention-control-resources-covid-19)

* General waste bins: if permitted PPE to be double-bagged and tied before placing in the external general waste bin. Additional bins may be required.
* Clinical waste bins: if required these need to be sourced through a specialist waste provider. Sourcing these specialist waste bins may need a previously arranged contract for delivery when needed. Victorian providers identified difficulty in arranging for clinical waste bins during outbreaks when demand was high and recommend establishing a prior supplier relationship, if required to meet local waste regulations, will mitigate against this risk.

**Commonwealth, State and Territory governments COVID-19 links**

**Commonwealth:**

* [Australian Government Department of Health](https://www.health.gov.au/)
* [Coronavirus (COVID-19) – putting on and taking off personal protective equipment – posters | Australian Government Department of Health](https://www.health.gov.au/resources/publications/coronavirus-covid-19-putting-on-and-taking-off-personal-protective-equipment-posters)
* [Guidance on the use of personal protective equipment (PPE) for health care workers in the context of COVID-19 | Australian Government Department of Health](https://www.health.gov.au/resources/publications/guidance-on-the-use-of-personal-protective-equipment-ppe-for-health-care-workers-in-the-context-of-covid-19)
* [COVID-19 infection control training | Australian Government Department of Health](https://www.health.gov.au/r%C3%A8sources/apps-and-tools/covid-19-infection-control-training)
* [Coronavirus (COVID-19) Environmental cleaning and disinfection principles for health and residential care facilities | Australian Government Department of Health](https://www.health.gov.au/resources/publications/coronavirus-covid-19-environmental-cleaning-and-disinfection-principles-for-health-and-residential-care-facilities)

**ACT:**

* [Advice for high-risk settings - COVID-19 (act.gov.au)](https://www.covid19.act.gov.au/stay-safe-and-healthy/advice-for-high-risk-settings)
* [PICC0279-COVID-TerritoryWide-PPE-Poster\_web-only.pdf (act.gov.au)](https://www.covid19.act.gov.au/__data/assets/pdf_file/0011/1653959/PICC0279-COVID-TerritoryWide-PPE-Poster_web-only.pdf)

**NSW:**

* [Personal Protective Equipment (PPE) - COVID-19 (Coronavirus) (nsw.gov.au)](https://www.health.nsw.gov.au/Infectious/covid-19/Pages/ppe.aspx)
* [COVID-19 Infection Prevention and Control Manual V2.1 Acute and non-acute healthcare settings](https://www.cec.health.nsw.gov.au/__data/assets/pdf_file/0018/644004/COVID-19-IPAC-manual.pdf)

**NT:**

Refer to Australian Department of Health

**QLD:**

* [Personal protective equipment (PPE) and infection control regional guidance](https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/novel-coronavirus-qld-clinicians/personal-protective-equipment-ppe)
* [Pandemic response guidance: Escalation of personal protective equipment usage in healthcare delivery, community health and care services, in-home care settings, and for healthcare delivery in correctional services](https://www.health.qld.gov.au/__data/assets/pdf_file/0007/1100500/pandemic-response-guide-ppe-healthcare-facilities.pdf)
* [Infection prevention and control guidelines for the management of COVID-19 in healthcare settings | Queensland Health](https://www.health.qld.gov.au/__data/assets/pdf_file/0038/939656/qh-covid-19-Infection-control-guidelines.pdf)

**SA:**

* [Infection control and PPE resources and links](https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/conditions/infectious+diseases/covid-19/health+professionals/infection+control+and+ppe)
* [SA PPE Decision Matrix V2.5](https://www.sahealth.sa.gov.au/wps/wcm/connect/952a07a8-a676-4e53-9603-67c44f2162c3/20015.18-COVID%2Bassessment%2Bmatrix%2B-%2BFINAL%2B-%2B08042020.pdf?MOD=AJPERES&amp)
* [PPE Workflow and guide for Primary Community Healthcare](https://www.sahealth.sa.gov.au/wps/wcm/connect/ee2f5283-1933-47f0-9e26-786a422be913/20015.18_PPE_Workflow_Primary+Community+Healthcare_300821.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-ee2f5283-1933-47f0-9e26-786a422be913-nKPtcKU)
* [SA COVID Waste management fact sheet 3.0](https://ndsorg-my.sharepoint.com/personal/heather_mcminn_nds_org_au/Documents/Documents/bendigo%20project)

**TAS:**

* [Coronavirus (COVID-19) | Tasmanian Department of Health](https://www.health.tas.gov.au/health-topics/coronavirus-covid-19)
* [TAS Cleaning and disinfection after a COVID-19 case](https://www.coronavirus.tas.gov.au/business-and-employees/covid-19-case-and-outbreak-management/cleaning-and-disinfection-after-a-case)

**VIC:**

* [VIC GOV COVID-19](https://www.dhhs.vic.gov.au/coronavirus)
* [Victorian government PPE donning and doffing training video](https://www.health.vic.gov.au/worker-health-wellbeing/protective-personal-equipment-ppe)
* [Victorian government Donning and Doffing PPE Poster](https://content.health.vic.gov.au/sites/default/files/migrated/sites/default/files/documents/202011/COVID-19_How%2520to%2520put%2520on%2520and%2520take%2520off%2520your%2520PPE%2520separately.pdf)

**WA:**

* [Advice on how to access Personal Protective Equipment (PPE) (health.wa.gov.au)](https://ww2.health.wa.gov.au/Articles/A_E/Coronavirus/Advice-on-how-to-access-Personal-Protective-Equipment)
* COVID-19 coronavirus: disability services (www.wa.gov.au)

**NDS additional support**

Please contact NDS for further information regarding COVID 19 management, support, resources and practical disability informed online infection prevention and control training.

**Infection Prevention and Control training for disability workers**

This Infection Prevention and Control training for disability workers course has been developed with an expert COVID infection prevention and control educator who worked with 300 disability sector workers across Victoria who completed the training face to face during late 2020 and 20201. [This online version](https://www.nds.org.au/resources/subsidised-infection-prevention-and-control-training-for-victorian-disability-workers) includes insights and recommendations from these workers.

The course has been widely acknowledged as valuable for any worker regardless of their experience, who is working in a COVID-19 risk environment. It supports the application of knowledge and practical skills to prevent and manage and control infection transmission. Modules include understanding of diseases, chain of infection transmission, correct donning and doffing of PPE and hand hygiene, cleaning and waste management and the role of vaccination. While it has a focus on COVID-19 there are references to broader infection control for wide application in any disability setting.

This online training program has been subsidised by Victorian Government for workers in Victoria, NDS invites providers in other states and territories to contact us for a discussion of costs as these vary depending on user access needed.

To find out more see [COVID-19 Hub - National Disability Services (nds.org.au)](https://www.nds.org.au/covid-19-hub)