

Spirometry Infection Control Recommendations for Primary Care

Spirometry is the most frequently performed pulmonary function test in general practice.

Spirometry in an infected person, carries a high risk of transmitting viral infections, even if the patient is asymptomatic. Testing generates aerosols that can spread infectious particles in the air, for several metres. The respiratory plume of exhaled particles may contain virus that remains airborne for more than 30 minutes, lasting up to several hours and surfaces may retain viruses for several days. <https://www1.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-novel-coronavirus.htm>

Taking into consideration The Thoracic Society of Australia and New Zealand (TSANZ) and Australia and New Zealand Society of Respiratory Science (ANZSRS), updated recommendations regarding the performance of lung function tests across Australia and New Zealand in January 2021¹, National Asthma Council Australia (NAC) advises the following recommendations for performing point-of-care spirometry in primary care settings under the current circumstances of no, or small numbers, of COVID-19 cases and no known community transmission.

These recommendations are subject to IMMEDIATE change if COVID-19 case numbers begin to escalate and community acquisition is identified. In this case, point-of-care spirometry should be discontinued in the primary care setting. Patients requiring spirometry for urgent clinical decision making should be referred to the local Respiratory Function Laboratory.

Also refer to your local State or Territory Health Department COVID-19 guidelines (websites below).

Before proceeding to lung function testing:

- Ensure that lung function testing is indicated at this time for your patient.
- Prior to lung function testing, ask your patient COVID-19 screening questions:
 - about any new respiratory symptoms such as fever, runny nose, sore throat, cough, loss of smell/taste (refer any symptomatic people for a COVID-19 test), and
 - epidemiological evidence of COVID-19 such as recent overseas travel or travel to an area with significant community transmission or contact with a suspected or confirmed COVID-19 case.

Recommendations if lung function testing is performed:

- Inline viral/bacterial filters must be used with all spirometry devices
- Contact your spirometer distributor / representative to enquire about availability of an inline filter for your specific spirometer device - do not proceed to testing if an inline filter is not available for your device
- Ensure the patient is afebrile prior to commencing lung function testing
- Ensure lung function testing is performed in a well-ventilated single room, minimising furniture and other equipment
- Ensure social distancing practices are adhered to in the health service
- Minimise the number of people present in the testing room
- Whenever possible maintain social distancing of 1.5m between patient and health care worker whilst testing
- Always request the patient to observe cough etiquette and respiratory hygiene
- As a minimum during testing, health care workers should wear Level 1 face masks when distanced more than 1.5 metres from the patient. Level 3 facemasks and protective eyewear are necessary when within 1.5 m of the patient
- Also refer to the PPE requirements as recommended by your local health authority
- Where possible, request the patient to bring their own short acting bronchodilator inhaler and spacer for use during testing. Single use spacers are an alternative. The pMDI casing and cap should be cleaned, if required, and disinfected after each patient use and the canister should be wiped with disinfectant or alcohol.
- In between patients, clean and disinfect all surfaces in contact with the patient (including scales, stadiometer, desk and chairs and testing equipment) with disinfectant solution or wipes containing at least 70% alcohol

(<https://www.tga.gov.au/disinfectants-use-against-covid-19-artg-legal-supply-australia>) using disposable paper towels or a disposable cloth.

Hand hygiene remains a vitally important component of infection control:

5 moments of hand hygiene (with soap and water, or alcohol-based hand rub, if hands aren't visibly soiled)
<https://www.hha.org.au/hand-hygiene/5-moments-for-hand-hygiene>

- before touching a patient
- before any procedure is performed
- after exposure to respiratory secretions
- after touching a patient
- after touching a patient's surroundings or belongings

Federal, State and Territory Health Departments:

www.health.gov.au	Australian Department of Health
www.dhhs.vic.gov.au/infection-prevention-control-resources-covid-19	Victoria
www.health.nsw.gov.au/Infectious/controlguideline/Pages/default.aspx	New South Wales
www.health.qld.gov.au/clinical-practice/guidelines-procedures/novel-coronavirus-qld-clinicians	Queensland
https://ww2.health.wa.gov.au/Articles/A_E/Coronavirus/COVID19-information-for-health-professionals	Western Australia
www.library.health.nt.gov.au/COVID-19	Northern Territory
www.sahealth.sa.gov.au/infectionprevention	South Australia
www.health.tas.gov.au/publichealth	Tasmania
www.covid19.act.gov.au/business-and-work/infection-control-training-and-resources	Australian Capital Territory

References:

1. Thoracic Society of Australia and New Zealand (TSANZ) and Australia and New Zealand Society of Respiratory Science (ANZSRS) <https://www.thoracic.org.au/documents/item/2012>, Jan 2021