

# Spirometry

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## Introduction

The COVID-19 pandemic has severely disrupted the provision for diagnostic spirometry in primary care since March 2020. Patients with respiratory symptoms, many of whom have been given a provisional diagnosis, are still awaiting diagnostic spirometry to confirm their diagnosis. There has been a rise in newly prescribed inhaled bronchodilators during the pandemic, which raises concerns that some provisional diagnoses will have resulted in patients being prescribed medications they may not need while waiting for spirometry testing and results (PCRS, 2021).

NHS England and NHS Improvement Clinical Policy Unit established a task and finish group to address the safe restoration of spirometry services. As a result, two documents have been produced, one from the Association for Respiratory Technology and Physiology (ARTP) and one from the Primary Care Respiratory Society (PCRS).

This SOP has been developed to use in conjunction with these documents, and we would strongly recommend that you review these documents before restarting diagnostic spirometry. These documents can be accessed here https://www.brit-thoracic.org.uk/document-library/quality-improvement/covid-19/restarting-spirometry/

The aim of this SOP is to provide practical advice which may facilitate practices to restart diagnostic spirometry and reducing the risk of Covid 19. Individual practices are advised to undertake their own risk assessments regarding the safety of their staff and the suitability of their premises to adhere to appropriate infection prevention and control measures.

## Prioritising patients

Practices should identify their backlogs and prioritise patients accordingly. The Primary Care Respiratory Society make the following recommendation for prioritising patients (PCRS, 2021).

### High Priority:

Patients for whom diagnostic spirometry will alter their treatment pathway or determine their onward care. You may wish to consider spirometry for patients with a provisional diagnosis but poor response to treatment.

### Interim Priority:

Spirometry to confirm a diagnosis is valuable but not an immediate priority. Supposing a patient’s history and clinical picture fits with the provisional diagnosis, and they respond well to treatment. In that case, it is important to confirm the diagnosis, but those patients in whom spirometry might alter the diagnosis or treatment should be prioritised.

### Low Priority:

Routine spirometry is of low priority. Annual spirometry is no longer a Quality Outcomes Framework (QOF) requirement, and the evidence shows little clinical value. However, if you still regularly perform spirometry on stable patients (e.g. those with pulmonary fibrosis), these should not be prioritised.

## Infection control

Spirometry is not considered to be an aerosol-generating procedure (AGP) (ARTP, 2021). However, spirometry-associated cough can generate aerosol droplets necessitating a risk-reducing strategy that may include:

· Tests must be performed using a single-use antibacterial antiviral filter.

· Individual clinicians undertaking spirometry should be risk assessed and appropriate measures to assess and reduce exposure risk.

· The spirometer must be cleaned between patients per the manufacturer’s COVID specific instructions. As a minimum, this should involve cleaning the outer casing of the transducer and the outer part of the spirometer itself with Clinell universal wipes, acticlor solution or similar.

· If undertaking reversibility, encourage patients who have their own short-acting bronchodilator inhaler and spacer to bring these to the appointment. Otherwise, use inhaler as single-use with disposable spacer.

· Unless the patient is considered high risk, the following Personal Protective Equipment (PPE) should be worn: disposable gloves & apron, goggles or visor and Type IIR (surgical) mask. If a patient is considered high risk, then a non-valved FFP3 mask should be worn (\*FFP3 masks require FIT testing), disposable gloves and apron. If only valved FFP3 masks are available the FFP3 mask must be shrouded by a visor or Type IIR (surgical) mask.

· If available, a perspex screen between patient and clinician can offer an additional physical barrier for protection. If a perspex screen is not available clinicians should stand behind the patient maintaining a 2-metre distance or as far behind as is physically possible.

· If available, use a room with mechanical air circulation or ventilate as able to (e.g. open windows). Ideally, this should be in the region of 6 room air changes per hour. Other options that may be considered depending on the local situation include a drive-through service or virtual spirometry.

· Patients should wear a face mask/covering at all times, lowering the mask to their chin whilst performing the test and replacing immediately after testing.

## Cough Management

Clinicians performing spirometry should be aware of and implement strategies to reduce cough.

Advise patient what to do if they start to cough:

· encourage patients to cough into the filter where possible.

· If they feel they need to come off the device to cough, they should have a surgical facemask in immediate proximity that is placed over the mouth immediately after completing the manoeuvre.

· For patients who are exempt from mask wearing a visor and using disposable tissues to cough into could be considered. These can then be disposed of by the patient into a clinical waste stream.

· Operators should stand behind or beside the patient during the test if a perspex screen is not used.

In a circumstance where there is an increased risk of infective cough, it is suggested to undertake a relaxed or slow vital capacity manoeuvre followed by a 1-2 second expiratory manoeuvre to obtain the forced expiratory volume in one second (FEV1).

## Initial considerations for spirometry

· Before booking the spirometry appointment, ensure that the test is clinically indicated and considered essential.

· Take a complete patient history, including screening for symptoms of or exposure to Covid 19 and rule out any contraindications to the test.

· When booking a spirometry appointment, explain the procedure and obtain verbal consent.

· Request that the patient undertakes a lateral flow test on the day of the appointment and is aware that they should cancel the appointment if positive. If the patient does not have access to lateral flow tests, they should be advised not to attend the appointment if they have COVID or viral symptoms.

· Send the patient written information (this can be via text, email, letter) with instructions prior to attending the test.

· Ensure that there is plenty of time between each patient booked for spirometry to enable adequate air changes and cleaning time. This may be achieved by choosing to undertake spirometry at the end of the day or by rotating rooms.

## Performing Spirometry.

· Perform spirometry verification before each clinic using a 3litre calibration syringe.

· Put on PPE (Type IIR (surgical) mask, goggles or visor, apron and gloves)

· Ensure other staff are aware that spirometry is being performed in the room

· Ensure the room is ventilated

## References

Association for Respiratory Technology & Physiology (ARTP), 2021, Statement for the NHS NATIONAL RESPIRATORY PROGRAMME Task and Finish Group Recommendations for undertaking risk-managed spirometry. Available from: <https://www.artp.org.uk/COVID19> [Accessed 10/06/2021].

Brtitish Thoracic Society (BTS), 2021, COVID-19: resumption and continuation of respiratory services. Available from: <https://www.brit-thoracic.org.uk/covid-19/covid-19-resumption-and-continuation-of-respiratory-services/#:~:text=BTS%20guidance%20on%20the%20resumption,and%20PCRS%20is%20available%20here> [Accessed 10/06/2021].

Primary Care Respiratory Society (PCRS), 2021, Spirometry in Primary Care Guidance on reinstating spirometry in England. Available from: <https://www.pcrs-uk.org/news/new-update-spirometry-guidance> [Accessed 10/06/2021].

### Tables

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