

# Foundations in Quality Assured Spirometry

## Work-based Competency: Performing Spirometry

## Introduction

Aligned with the Association of Respiratory Technology and Physiology (ARTP-2013) & ARTP Statement on Pulmonary Function Testing, 2020), in conjunction with the Primary Care Respiratory Society, UK (PCRS, 2019), the British Thoracic Society, and Care Quality Commission (2019); this competency document is set out for the provision of evidence that meets the standards required for practitioners to perform quality assured diagnostic spirometry.

Spirometry is essential, alongside clinical assessment (risk factors, symptoms), in the diagnosis, assessment and monitoring of COPD (GOLD, 2011; NICE, 2019) and can support in the diagnosis of Asthma (GINA, 2011; BTS 2008). Poorly performed spirometry can potentially be harmful and misleading. Therefore, it should be undertaken by individuals who are trained and certificated as competent. Since 2019 the PCRS have set out alternative routes to developing competence in performing and interpreting spirometry; and subsequently becoming accredited on the National Spirometry Register if required by their employer. Being on the National Register is not mandatory. However, in order to achieve quality and consistency, the national standards provide a benchmark for quality assured spirometry and thus improve the quality of diagnosis in people with respiratory disease.

Since spirometry is used to measure lung function and air flow it is an essential skill for all Practitioners and Assistants and for those from a wide range of professional backgrounds who are working with patients with Respiratory conditions.

Historically, most people will have achieved competency by attending a training programme, developed a portfolio of learning from practice that included undertaking a clinical assessment as being competent by an ARTP accredited professional. Since 2019 the nationally recognized standards can be achieved through different routes. There are two distinct elements of spirometry: performing spirometry and interpreting spirometry. Arguably, one is only able to understand whether a desired outcome is reached when performing spirometry, if they can make sense of the result.

This competency document deals with Foundation -Performing Spirometry. There is no prescribed word count for your portfolio- evidence supplied will show evidence of knowledge, skill, attitude and ultimately your competence.

## **Foundation- performing spirometry tests**

The requirement is that you as an operator regularly perform spirometry tests without needing to interpret the results. You will need to understand how to prepare the equipment and patient, as well as carry out, measure safely and accurately to ARTP quality standard and be able to identify poor spirometry tracings.

Theory, work-based learning, an objective structured clinical examination (OSCE) and reflection will enable you to produce a professional portfolio of evidence of your learning and competence to prepare for and perform spirometry.

### **The professional portfolio evidence will include the following:**

#### **Section 1**

##### **Awareness and use of the protocols for cleaning and maintaining the equipment (CQC); describe your role in this.**

You may or may not be involved in managing or organizing the cleaning and servicing of the equipment. However, it is important to show your understanding of due processes to achieve this.

Evidence: Write a paragraph on protocols for cleaning and maintaining the equipment in your place of work. Supplementary information can include a copy of the protocols.

#### **Section 2**

##### **Calibration logs x 10 biological blows.**

Evidence: Print and photocopy 10 separate biological blows that can demonstrate a personal baseline in case of questionable patient tests.

#### **Section 3**

##### **List of absolute and relative contraindications**

Evidence: Lists of two types of contraindications to spirometry testing.

#### **Section 4**

##### **Knowledge for preparation of equipment and patient safety**

Evidence: Write about what equipment you will require to conduct spirometry and the purpose of each. Photographs or sketches of equipment can be included as supplementary information.

## **Section 5**

**Knowledge and understanding of measures to be undertaken using spirometry (VC, FVC, FEV1, FEV1/FVC ratio and PEF).**

Evidence: Discuss the individual measures and their meaning.

## **Section 6**

**Knowledge and understanding of the types of spirometry testing: baseline, post bronchodilator and reversibility testing.**

Evidence: Write a brief description of each type of testing and their significance in the investigation, diagnosis and differentiation of lung conditions.

## **Section 7**

**Case studies: Anonymized patient data**

Print and photocopy five patient spirometry tests and include a reflection on the quality of the measure. Include other relevant anonymized clinical information, including risk factors, and symptoms.

## **Section 8**

**Distinguishing between acceptable and poor tracings**

Write about the meanings of technical acceptability and reproducibility; showing critical understanding of what constitutes poor spirometry tracings and common errors.

## **Section 9**

**Objective Structured Clinical Examination (OSCE)**

Assessment of one spirometry test to ARTP standard by ARTP registered/qualified professional. 20-25 minutes

## **Section 10**

**Reading List**

A reading list that informed your knowledge and competency.