



ARTP - Full Certificate in Spirometry

PORTFOLIO CONTENTS

ALL WORK SUBMITTED MUST BE THE CANDIDATE'S OWN, PLEASE CONTACT ARTP ADMIN IF YOU ARE UNABLE TO MEET THIS CRITERIA

All candidates are required to complete a portfolio of evidence of their performance of Spirometry measurements as well as specified case histories for assessment purposes. This forms part of the examination requirements. Candidates must submit **only** the requested portfolio requirements as detailed below.

All pages in the portfolio must be numbered and recorded on the contents page so they can be easily located by the assessor. All of the work must be clearly divided into sections.

Your portfolio must consist of the following sections:-

SECTION A

- 1) Contents page
- 2) Curriculum Vitae
- 3) Background information about your workplace to include:
 - Local arrangements for lung function testing
 - Method of referral. e.g. nurse led clinics or ad hoc basis
 - Number of tests performed (weekly/monthly etc) and the type of patients you are testing, e.g. screening for occupational health, asthma, COPD etc
 - Where the tests are performed and the type of staff performing the tests, e.g. doctor, nurse, clinical physiologist or other.
- 4) Course attendance certificate and/or accreditation of prior learning
- 5) Test performance criteria to include:
 - A copy of your local protocol for performing Spirometry (where this differs from ARTP guidelines, an explanation should be given)
 - A discussion of the contraindications to performing Spirometry
 - A description of pre-test patient instructions e.g. withholding bronchodilators, smoking etc.
- 6) With the aid of diagrams, describe the inside of a peak flow meter and how it operates.
- 7) With the aid of diagrams describe the way in which **your** Spirometer measures Spirometry values. You should state the measurement principle of your device (e.g. flow measuring or volume measuring).



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SECTION B

The following sections should contain evidence gathered by you during your working practice. It must consist of traces, reports (computer generated or written), witness accounts and logs of verification and cleaning.

- 8) Calibration or verification.
- 9) Quality assurance.
- 10) Cleaning.
- 11) Patient tests.
- 12) Problems encountered during testing.
- 13) Case history.

SECTION REQUIREMENTS – FURTHER DETAIL

8. Calibration or Verification.

- a. If your spirometer produces a hard copy, provide evidence of at least 20 calibrations or verifications performed by you. These should be performed over a minimum of a one month period.

Or

- b. If your spirometer does not produce a hard copy, design a system for recording your calibrations or verifications and record at least 20 results. These should be performed over a minimum of a one month period.

In addition to the calibration record, a piece of written work must be submitted explaining the purpose of calibration and demonstrate your knowledge of how this should be achieved. It should include a brief description of what you did/would do if the calibration/verification was outside the expected value or range.

Ideally a 3L syringe should be used for quality control and calibration; however marks will not be deducted for using 1L syringes. If a syringe is not available, calibration/verification of the Spirometer should be undertaken at another practice or hospital. This is good practice for future measurements to ensure quality control.



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9. Quality Control/Assurance

Briefly describe the purpose of Quality Assurance/Quality Control in the context of a Spirometry service. Please undertake the following practical exercises:

- a. Perform Spirometry and Peak Expiratory Flow daily, on the same person, over a period of at least two weeks (at least 10 results of each in total should be collected). These measurements can be made during the same forced expiratory manoeuvre if this is your routine practice.
- b. Record the values in a table.
- c. Find the mean value for each parameter measured and calculate an acceptable range by using $\pm 5\%$ of the mean value of the measurements.

The person used for your QC log should have normal lung function. This can be yourself or another member of your team. A physiological normal range for the person which can be used to quality assure your equipment should be created.

Record all the spirometry results in your portfolio.

10. Cleaning

- a. Provide a cleaning procedure for the spirometer in your care. You must include your references for this and a work schedule to show that cleaning has been completed.
- b. Please also include what contingency plans you have in place for dealing with potentially infectious patients e.g. suspected TB, influenza etc.

11. Patient Tests

You must produce traces or record results (all efforts, even those you think invalid) for FEV₁, FVC, FEV₁/FVC%, PEF and VC (where possible), along with the predicted normal values on:

- 1) **Six** patients with obstructive airways disease, graded as follows:
 - a. **Two** patients with mild disease
 - b. **Two** patients with moderate disease
 - c. **Two** patients with severe disease
- 2) **One** patient that exhibits a clinically significant bronchodilator response



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- 3) **One** patient that does not exhibit a bronchodilator response. (If you do not routinely perform reversibility studies you should draw a pre and post Spirometry for each and discuss the criteria for determining a positive/non-significant response).
 - 4) **One** patient with a restrictive defect (if this is not possible produce a drawing of the expected result).
- **You must include the height, age, diagnosis, current drug therapy, smoking history and date of test for each patient included in this section.**
 - **You must highlight which test results you would report for each patient from those performed.**
 - **You must clearly state how a significant and non-significant bronchodilator response results have been defined, indicating the guidelines used.**
 - **You must discuss your interpretation of each of the tests you have included.**
 - **PLEASE ENSURE ALL PATIENT DATA INCLUDED IN YOUR PORTFOLIO IS ANONYMISED. FAILURE TO DO SO WILL CONSTITUTE A BREACH OF PATIENT CONFIDENTIALITY AND WILL RESULT IN AN AUTOMATIC FAIL BEING AWARDED.**
 - **Traces must have been performed within a year of your portfolio submission date.**
 - **You must include a signed witness statement from a senior member of staff at the place where you are employed indicating that all of the traces included have been performed by you.**

12. Problems Encountered During Testing

You must include 5 different hard copies / sketches of problems that you have or may encounter when performing spirometry and explain what you did/would do to overcome these problems. These may include patient, technical or equipment issues.



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13. Patient Case History

For **one** of the patients included in your portfolio write a full case history. Include presenting symptoms, previous medical/occupational history, smoking history, current drug therapy, investigations performed including **results of spirometry**, diagnosis, prognosis, and expected future management.

The word count for the case history is 1500 \pm 10% words. The word count must clearly be stated at the end of the assignment. 10% of the marks will be deducted for assignments over or under the specified word count.

All sections must be fully completed and obtain a pass mark for the portfolio to be awarded a pass.