

The ARTP/BTS Certificate in Spirometry

In recent years the number of health care professionals, other than laboratory based lung function technicians, performing relatively simple lung function measurements has gradually increased. Although nationally agreed standards have been published for the performance of lung function tests, spirometric measurements made in a variety of primary and secondary health care settings by staff, other than those formally trained and in lung function laboratories, often falls well below the acceptable standard. With the recent publication of guidelines for the care of patients with COPD, in addition to those already published for Asthma, a greater emphasis is placed on basic lung function measurements at all levels of health care provision.

To ensure that patients are appropriately investigated and monitored the Association for Respiratory Technology and Physiology (ARTP) in conjunction with the British Thoracic Society (BTS) through the BTS/ARTP Liaison Committee have established a qualification to assess the competence of practitioners to perform such measurements.

The ARTP/BTS Certificate in Spirometry has been introduced to give a recognised national qualification for those practitioners who complete the Spirometry assessment.

Aim and format of the certificate:

To provide a competence based assessment for the measurement of dynamic lung volumes and flows and the response to short acting bronchodilators.

The assessment consists of the following elements:

- 1) *Portfolio of evidence*
- 2) *Worked-based assignment*
- 3) *Practical and oral assessment*

On registration for the certificate you will be sent your registration number, the ARTP Spirometry ARTP/BTS handbook (if appropriate), Guidelines for completion of the certificate and the work-based assignment and information regarding compilation of the portfolio.

You will have six months to complete and submit the portfolio and assignment.

When the assignment and portfolio have been successfully completed the ARTP Administrator will inform the candidate of the date and place of the practical and oral examination. Extensions will only be granted under serious circumstances. Only one extension is allowed and candidates must apply to the Spirometry Administrator in writing before a decision is made.

Completion of a short spirometry training course or evidence of appropriate work-based experience approved by the Assessment Committee is required before the Spirometry Certificate programme can be undertaken. A list of ARTP/BTS approved Spirometry centres and proposed course dates can be found on the ARTP website (www.artp.org.uk) or by contacting the ARTP Administration office at the address below.

ARTP/BTS Spirometry Certificate Registration fees:

£130 (Registration fee & Course Book)

or

£100 (Registration fee only)

To register for the ARTP/BTS Spirometry Certificate assessment please complete and return the enclosed form with your payment to:

ARTP Administration (Spirometry)
Suite 4, Sovereign House,
22 Gate Lane, Boldmere
Sutton Coldfield, West Midlands. B73 5TT
Tel/fax: 0121 354 8200 Email: spirereg@artp.org.uk



**ARTP/BTS CERTIFICATE IN SPIROMETRY –
APPLICATION FORM**



First Name:

Surname:

Address for correspondence::

Tel No:

E-mail:

Job title:

Professional Qualification:

ARTP Spirometry Course Centre (if attended)

Please enclose fee (Cheques made payable to ARTP) and send to:

ARTP Administration (Spirometry)
Suite 4, Sovereign House
22 Gate Lane, Boldmere
Sutton Coldfield, West Midlands, B73 5TT
Tel/fax: 0121 354 8200 Email: admin@artp.org.uk

Would you like to receive the assignment/portfolio pack via :

Post

E-mail

PORTFOLIO CONTENTS

All candidates will be required to complete a portfolio in the workplace to collect evidence of performance of spirometric measurements as well as specified case histories for assessment purposes, which will form part of the examination requirements.

All pages in the portfolio should be numbered and recorded on the contents page so they can be easily located by the assessor.

Your portfolio should consist of the following:-

- 1) Contents page
- 2) CV
- 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 done 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) Performance criteria. Included along with the assignments from ARTP. Where your department procedures differ from ARTP guidelines, an explanation should be given.
- 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 the spirometer, commonly used by you, operates. This could be wedge bellows, turbine, pneumotachograph etc.

For the following sections evidence should be gathered during your working practice should consist of traces, reports (computer generated or written), witnessed 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

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 on separate occasions, i.e. not on the same day.

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 on separate occasions, i.e. not on the same day.

Write a brief description on what you did/or would do if the calibration/ verification showed an error.

Ideally a 3L syringe should be used for quality control and calibration, however marks will not be lost for using 1L syringes. If syringes are not used as standard, please perform calibration/verify the Spirometer at another practise or hospital. This is good practise for future measurements to ensure quality control.

Quality control

Using yourself or another member of staff, create a physiological normal range for that person which can be used to quality assure your equipment. This person should have normal lung function

To do this, perform spirometry and Peak flow daily, on the same person, over a period of two weeks (at least 10 results in total should be collected).

Find the mean value for each parameter measured and calculate an acceptable range by using $\pm 5\%$ of the mean.

Record all the results in your portfolio.

Cleaning.

Write a cleaning procedure for the lung function equipment in your care. Include a work schedule that can be signed to show that cleaning has been done.

What contingency plans do you have for dealing with potentially infectious patients. e.g. suspected TB, influenza etc.

Patient tests.

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:-

6 patients with obstructive airways disease, 2 mild, 2 moderate and 2 severe.

2 patients that have bronchodilator response.

2 patients that do not exhibit bronchodilator response.

1 patient with a restrictive defect (if this is not possible produce a drawing of the expected result).

Include the patient's height, age, diagnosis and current drug therapy.

Hi-light which test results you would report for each patient from those performed.

Include a copy of the predicted normals that you are using. i.e. ECSC.

Problems encountered during testing.

Describe at least 6 problems that you have encountered performing the test procedures and explain what you did to overcome these problems. Include traces or results from invalid blows (you may reference these from the previous section if some have been included).

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, investigations performed, results of spirometry, diagnosis, prognosis, current drug therapy and expected future management.

Word count should be 1000-1500 words.

WORK-BASED ASSIGNMENT

A work-based assignment will be set based on the underpinning knowledge requirements for competent practice which are not being assessed in the formal examination process and will be used instead of a written examination

The candidate must achieve a mark of 65% or above in the assignment before they can proceed to the practical and oral examinations. If a satisfactory mark is not achieved the candidate will be allowed to re-submit the assignment one further time. Remedial advice will be offered by the ARTP/BTS training centre (if attended) and the Spirometry Registrar, Dr Cath Billings.

All textbooks used must be listed at the end of each assignment. The student may seek verbal advice concerning the assignment, if necessary, but it should be completed unaided.

Ensure that the assignment is labelled with your name and candidate number.

PRACTICAL AND ORAL EXAMINATION

Candidates will be examined in their own place of work whenever possible and will be required to provide a patient for testing. If this is not possible, the candidate may be required to travel to an examination centre for their practical and oral examination. This may be the centre that performed the spirometry training.

Please ensure that you are at the centre 15 minutes prior to your allotted time. Failure to do so may result in your assessment being cancelled.

You will be provided with a list of available spirometers at the centre, if you use a different type/make you will need to take this with you.

An ARTP/BTS national assessor will observe you performing the tests and producing the results (with reference values) for the following procedures:-

- Peak Expiratory Flow (PEF) - Peak Flow Meter
- Relaxed Vital capacity (VC) - Spirometer
- Dynamic Spirometry (FEV₁, FVC, FEV₁/FVC) - Spirometer
- Administration and Response to a Bronchodilator.

If for any reason the examination cannot take place, failure to give 24 hours notice to the assessment centre will incur an excess charge.

The assessor will not ask questions whilst you are performing the measurements. The tests should be performed according to the ARTP/BTS Guidelines for the Measurement of Respiratory Function (Respiratory Medicine, 1994, 88: 165 - 194). Any local variations to the guidelines must be brought to the attention of the assessor prior to the practical.

The tests should be carried out within the context of the national guidelines for Health and Safety, Infection Control, care and well-being of the patient.

At the start of the practical you will be issued with a standard patient form and you must fill in all the details of your patient before the start of the test. Failure to do so will incur penalties.

The oral assessment will start after the practical assessment has been completed and the candidate has prepared the results. The questioning will generally focus on the background theory to the measurements, the results and their variance with disease, knowledge of testing protocols and contingency plans for more unusual events.

RESULTS

To be successful in the assessment you must obtain a pass in the assignment, practical and oral. If a fail is given for the practical or oral both must be re-sit again, at a later date, but the pass from the assignment can be carried over.

A merit may be awarded for the assignment, oral and practical if a high standard is exhibited. To gain an overall merit in the assessment, two parts must be passed with merit. All candidates will be notified directly by the ARTP Administrator after notification by the ARTP/BTS Liaison Committee.

APPEALS PROCEDURE

If a candidate feels they have been treated unjustly they have the right to appeal. In the first instance this will be to the assessor at the training centre and then to the ARTP/BTS liaison committee. The assessment committee will review all the paperwork produced in the assessment (portfolio, assignments, practical record and oral questions) to judge the correct grade and their decision will be final.