Assessment of the ERS Spirometry Driving Licence programme

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SUMMARY

The assessment of the learning outcomes for this course is an essential part of the preparation and the delivery of ERS Spirometry Training Programmes and awarding the ERS Spirometry Driving Licence. It is essential that course directors follow the assessment processes to ensure high quality education programmes and standardisation of the certification process.

Within this document you will find
1. Assessment guidelines
2. Workbook template including tips for trainers

1. Assessment Guidelines

This section provides information on the assessment process that must be followed for each training part. Different assessment methods will be employed for different parts. It is essential that course instructors and directors strictly follow the assessment guidelines to ensure that each test appropriately measures the knowledge and skills required for each module. Additional support tools including an examination blueprint, marking sheets and instructions for practical assessment are also available for course directors to follow.

Part I Assessment Guidelines

Process

Participants who complete Part I training will be expected to complete an online written MCQ online test within 4 weeks of attending the course. Each participant will receive an online access code to access the test on the ERS website. The test consists of 30 items, sorted by different types of questions. For each type, ‘Type A’ questions and ‘k prime’ questions, candidates will find an explanation. The duration of the online test is a maximum of 1 hour. Candidates will have the opportunity to comment on the test questions, which will be monitored and collated by ERS headquarters. This information can be shared with the course director on request. All examination

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1 Note to trainers: Trainers who apply to deliver the ERS Spirometry training programme will be provided with the information and documentation necessary to complete the assessment process and award the ERS Spirometry Driving Licence. The ERS office will support trainers preparing to assess candidates to take the test for both part 1 and part 2.
candidates will be provided with their certificate once they have successfully completed the test. Candidates will not be able to attend Part 2 training without this certificate.

**Workbook Assessment Guidelines**

Participants are required to complete the ERS Spirometry Workbook prior to attending Part 2 training, which they must bring with them to the Part 2 training. The Workbook will form part of the assessment process. The Workbook must be submitted to the course organiser digitally (if possible) at least 1 month before the Part 2 course. Workbook assignments must be marked and graded by the course instructors and course directors and this marking must follow the ERS marking sheet designed to help guide instructors through this process.

**Part 2 Assessment Guidelines**

**Who can assess?**

The participant should only be assessed either by the course director or a course instructor. Other instructors who have completed the ERS Spirometry Train the Trainer may also assist the course director with the assessment process. All examiner names must be provided on the application form.

**How are the practical skills assessed?**

The spirometry practical skills are assessed by direct observation of the participant. Directly observed procedural skills (DOPS) is an assessment method designed specifically for the assessment of practical skills. The participant should be assessed on the practical procedure of spirometry as well as communication, and professionalism. All performance criteria are listed on the marking sheet. This process should take no more than 30 minutes.

The assessor will than spend 5-10 minutes providing immediate feedback and completing the assessment form with the participant present.

**Who is required for the examination process?**

**Examiner**

The examiner will be expected to follow the exam processes and use the documentation and instructions provided by ERS.

**Candidate**

ERS strongly recommend that the participant perform the practical assessment on the previous candidate. *Therefore candidates will first perform the test and then become the test subject.*

**What preparation is required before an examination?**

There are a number of steps that must be prepared prior to the examination. All supporting assessment tools can be found in the educational materials for trainers.

**Clear instructions for the examiner** – Examiners must follow a specific marking sheet which covers items in the pre-spirometry test criteria and items covered during the spirometry testing. A copy of the candidate’s instructions should also be given to the examiner.
**Candidate** – the candidate must be informed of the test process and fully understand what they must achieve during the examination.

**List of equipment required for examination** – Height measuring device, spirometer (ensure sufficient number are available), mouthpieces, nose clips, hand washing facilities (or anti-bacterial hand gel). Reference document for equipment ERS/ATS Spirometry guidelines 2005.

**Marking sheet and feedback form** – these documents should include all of the aspects required to test spirometry, and how long the test should take.

**How are the candidates graded?**

Participants will be graded on pass / fail criteria only.

**What feedback should be provided to candidates?**

a. To maximize the educational impact of this assessment method, not only should the assessor offer feedback on improvement areas, but should not fail to mention areas that have been covered particularly well by the participant.

b. Feedback should be given to each participant individually in a private area of the training centre. Instructors inform participants if they have successfully passed based on the practical assessment.

**Awarding the ERS Spirometry Driving Licence Part 2**

The outcome of the assessment is a professional judgment of the assessor that the trainee has completed the spirometry test to the standard expected and outlined in the learning outcomes. The trainee must be informed if they had passed or failed on the day of the practical assessment.

**Fail criteria for candidates who have not passed the practical test**

**If candidates fail:**

1. **Part 1 online MCQ test** – they must repeat the course and re-sit the online test

2. **Workbook** – they must resubmit the failed workbook section (A OR B) within 6 weeks after the Part 2 and practical test. Candidates may still successfully pass Part 2 if the second attempt is passed within this time.

3. **Part 2 practical test** – Candidates may re-sit the practical exam on the same day with a different examiner where possible. If the candidate fails the test on the second attempt they must register again to attend Part 2 of the European Spirometry training programme again

**2. Workbook template including tips for trainers**

**Spirometry Workbook**

A workbook must consist of the following sections:
SECTION A

- The contents page

- Curriculum Vitae that must include only:
  a. Name
  b. Educational Background
  c. Professional Background
  d. Previous spirometry training experience (if any)
  e. Do you perform spirometry? Yes/No
     i. If yes, how many tests do you perform monthly?
  f. Indicate the number of years performing or practicing spirometry measurements

- Your Spirometry Training Course attendance certificate and/or accreditation of prior learning

- Background information about your work environment, which should include:
  a. Local arrangements for spirometry testing
  b. Method of referral e.g. GP, nurse led clinics etc.
  c. Number of spirometry tests performed in your service monthly

- A copy of your local protocol for performing spirometry including the guidelines that you use. This must be a document that you or your team uses and not a photocopy of guidelines. *If you do not have a protocol, you should design or develop a working protocol.* The protocol should include:
  a. The indications for performing spirometry
  b. The contraindications to performing spirometry.
  c. A brief description of the instructions that the patient should receive PRIOR to having spirometry performed.
  d. The importance of keeping all results stored safely and accessibility to health care users
  e. Awareness of audit processes and self-assessment of the spirometry service to ensure sufficient clinical skills are maintained and quality is upheld
  f. Measurement principle of your device:
     i. With the aid of a diagram, describe the way in which your spirometer measures spirometry values. You should state the measurement principle of your device (e.g. is it flow measuring or volume measuring device?)

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2 *NOTE TO TRAINERS:* I am a Practice Nurse that works in a busy Primary Care practice in a large inner city. Patients are referred for spirometry by the Doctor to diagnose and assess the severity of any lung disease. The majority of our patients are assessed for possible COPD or asthma. There are 2 experienced practice nurses (>10 years qualified) that perform ~ 20 full spirometry tests per week on adults only. Interpretation of the results is performed by the Senior Nurse Practitioner.

3 *NOTE TO TRAINERS:* the candidate should be able to name the device (MicroLab rotating vane, EasyOne ultrasonic, Vitalograph pneumotachograph etc.). They should demonstrate that they understand how it makes the measurement and include a labelled diagram. This can be hand drawn or a picture and should identify the important technical features.
Calibration or Verification

This section consists of TWO parts:

1. A written piece of work (maximum 200 words) must be submitted explaining why your spirometer must be calibrated or verified regularly and a description of how you would do this. It should include a brief description of what you did/or would do if the calibration/verification was outside the expected value or range. For syringe calibration (physical control), a 3L calibration syringe should be used. 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.

2. Produce a calibration/verification record for your spirometer. If your spirometer produces a hard copy, provide evidence of at least 20 calibrations or verifications performed by you. These must be performed over a minimum of a one month period.

   OR

   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 must be performed over a minimum of a one month period.

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Note: The following sections should contain evidence gathered by you during your working practice. It must consist of traces, and logs of verification and cleaning:

- Calibration or verification of your spirometer
- Quality assurance of your spirometry service
- Cleaning of your spirometer

NOTE TO TRAINERS: This is an opportunity for the candidate to demonstrate that they understand the difference between calibration and verification. You should be confident that the candidate can do this. The candidate should be able to take basic remedial action should calibration/verification fail. A candidate should not fail if they have only a 1L syringe, but you would expect them to demonstrate that they understand the limitations of this.
Quality Control

This section consists of TWO parts.

1. Briefly explain (200 words maximum) the purpose of Quality Control in the context of your spirometry service.

2. Create a Quality Control record using either yourself or a member of your team. The person used for your QC record should have normal lung function.
   i. Perform spirometry daily/weekly, on the same person. At least 10 results of each in total should be collected.
   ii. Record the values in a table
   iii. Calculate the mean value for the following values that you have recorded in your Quality Control record:
       a. The FEV₁
       b. The FVC
   iv. Calculate an acceptable range by using $\pm 2SD$ of the mean value of the measurements obtained.

   **Record all the spirometry results in your Workbook.**
• Cleaning
  This section consists of TWO parts.
  a. Provide a cleaning procedure and a copy of the work schedule to show that cleaning has been completed regularly for the spirometer in your care.
  b. Describe what contingency plans you have in place for dealing with potentially infectious patients
SECTION B

- Patient Tests
  You must produce 15 spirometry traces with relevant technical comments for FEV₁, FVC, FEV₁/FVC% and VC (where possible) that you have recorded, along with the predicted normal values. If it is possible with your device, include all curves and all data recorded.
  o 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.
  o You must include the height, subject age, and date of test for each patient included in this section
  o From the values obtained for each test, you must highlight which values you would select for each patient.
  o 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.

- Problems Encountered During Testing
  You must describe a minimum of 3 problems that you encountered during spirometry testing and explain what you did/would do to overcome the problems. The problems may include:
- patient errors
  - a. cough
  - b. sub-maximal effort

- technical errors
  - c. slow start
  - d. early termination

- equipment issues
  - e. calibration errors

You should include any available patient traces to explain your description. If traces are not available you should provide a sketch or drawing in your explanation.