CRITERIA FOR ACCREDITATION OF ERS EUROPEAN TRAINING CENTRES IN ADULT RESPIRATORY MEDICINE

CONTENTS

PREAMBLE

The accreditation phase of the Adult HERMES (Harmonised Education in Respiratory Medicine for European Specialists) project was launched by the ERS for training centres. This is to ensure that training centres in adult respiratory medicine across Europe and beyond have the opportunity to be awarded a certification of accreditation for their educational and training programmes. To successfully implement an accreditation process, specific development areas were considered necessary:

1. Documented minimum criteria
2. Requirements for the accreditation process
3. Supporting documentation to determine if prerequisites are met

The ERS Criteria for Accreditation of European Training Centres in adult respiratory medicine document marks this first step of the project phase. This document is a revision of the *Adult HERMES: criteria for accreditation of ERS European training centres in adult respiratory medicine* [1] published in 2010. Criteria set therein were validated by a wider group of experts and through a pilot phase.

Titles and structures outlined within the document as well as indicative numbers presented can be country specific and may vary. The document should be used as a guideline for best practice and is intended to provide training centres with descriptions of functions and roles important for achieving high-quality training of adult respiratory specialists.

INTRODUCTION

This document provides a series of recommendations which training centres should match in order to be recognised as European training centres by the ERS in the frame of the HERMES initiative. Minimum conditions to ensure appropriate clinical and educational experience for all trainees enrolled in the training programme and procedures to be followed to become formally accredited as an ERS European training centre are also described.

Benefits for the training centre in adhering with recommendations:

1. Proof of excellence
2. Higher visibility
3. Quality label/ reputation
4. Increasing attractiveness for trainees
5. Incentive for sufficient dimension of staff, room and equipment including the full spectrum of diagnostic and therapeutic techniques, according to the curriculum
6. Incentive for better funding and better grants for research

SECTION 1: TRAINING CENTRE NETWORK: PARTICIPATING SITES AND NETWORK STRUCTURE

1. Training centre network definition

a. A **training centre** is defined as a centre that provides all mandatory modules as prescribed in the curriculum for adult respiratory medicine [2], as well as specific resources allowing trainees to fully complete their training at that centre. The training centre may be formally linked to a training site as defined below.

b. A **training network** can be composed of a training centre and any number of participating training sites or a network of formally linked participating training sites, which provides any part of the required training. A training network consisting of training sites requires formal letters of agreement defining roles and responsibilities between all training sites. Training centres networks should demonstrate that the trainees are able to rotate in different training sites within the training centre network during their training period.

c. A **training site** is defined as a site which provides a specific part of the required training, specific training resources and allows trainees to rotate through each training site in order to reach the educational goals as defined in the curriculum.

SECTION 2: MINIMUM COMPONENTS FOR A FULL TRAINING PROGRAMME IN ADULT RESPIRATORY MEDICINE

1. Trainee selection

a. Trainee selection **should** be performed in accordance with national rules, customs and for EU countries in accordance with EU regulations.

b. The training centre/network **should** provide at least one full time equivalent position (FTE) for each year of the training duration, averaged out over the whole training duration (i.e. 1 FTE's for a 3-year training programme).

2. Duration of training

a. Duration of training

i. Duration of training **should** comply with the conditions set in accordance with national rules and customs and for EU countries in accordance with EU regulations.

b. Calendar months

i. Prior to entering specialty training, a common trunk in General Internal Medicine (GIM) of a usual 2-3 years **is recommended**. This will however differ across countries and depend on national criteria and guidelines.

ii. Following GIM training, at least 2-3 years of subspecialty training in respiratory medicine **are necessary**.

iii. The overall training **is recommended** to last at least 5 years.

c. Optional training (elective training)

i. The training centre/network **should** set up a mechanism to allow trainees to go out of the programme, where appropriate, and do elective training or research over an agreed period of time. This elective training **should** take place in addition to the recommended 2-3 years of specialty training according to national guidelines.

SECTION 3: CONTENT OF CLINICAL EXPERIENCE

The training centre/network **must** ensure that the training programme provides trainees with a balanced mix of clinical experience and educational opportunities.

a. Outpatient services

i. An **indicative** 150 new outpatients and 400 follow-up patients per year and per trainee, averaged over the whole training period **are recommended**.

b. Provision for special outpatient services

The training centre/network **must** be able to provide a wide range of outpatient services, *for example*:

i. COPD and asthma
ii. Lung cancer
iii. Interstitial lung disease
iv. Bronchiastesis (CF and/or non-CF)
v. Oxygen treatment and home ventilation
vi. Pulmonary hypertension
vii. Respiratory infections including tuberculosis
viii. Respiratory disorders during sleep
ix. Pulmonary vascular diseases

In the event that at training centre or network does not provide one of the above service(s), accreditation could be granted on condition that a partnership with other centre(s) or network(s) guarantees the appropriate exposure of the trainee.

c. Inpatient services

i. The training centre/network **must** be able to provide a sufficient number of patients to cover the spectrum of respiratory diseases defined in the syllabus [3].

ii. An **indicative** 300 inpatients per year per trainee, averaged over the whole training period **are recommended**.

d. Logbook/Portfolio

i. It is a **must** that trainees keep a logbook/portfolio which should be regularly signed by the educational and/or clinical supervisor. The patient data collected in the logbook **mus**t be anonymous.

ii. The portfolio **should** be used for providing feed-back to trainees.

e. Referrals

i. The training centre/network **must** ensure trainer availability for discussion with trainees for each referral in order to ensure education and clinical governance.

ii. Consultations from other clinical services **must** be accessible in a timely manner (**ideall**y within 24 hours, however this will be dependent on the emergency of the consultation).

SECTION 4: CONTENT OF EDUCATIONAL EXPERIENCE

a. Educational goals:

The training centre/network **will** provide educational standards and appropriate setting to fully prepare trainees to enter into practice as an adult respiratory medicine specialist.

1. The training centre/network **will** support and encourage professional development of faculty members in key areas of teaching and learning.
2. Trainees **will** be supported in their professional development and critical self-assessment.
3. The training centre/network **will** provide a learning environment to develop the roles required of the medical expert as a communicator, collaborator, manager, health advocate, scholar and professional [4]
4. Trainees **must** learn about the theory and practice of developing health literacy, enabling shared decision-making, and supporting self-management.

b. Educational strategies

i. The educational goals outlined above **will** be accomplished by prescribing the learning outcomes, providing a range educational methods and relevant assessment methods, as well as ensuring an appropriate level of supervision, supporting faculty development, and providing the infrastructure to support the educational setting.

c. Competencies

i. The programme **should** be able to deliver the competencies (such as knowledge, skills, attitudes and behaviour) described in the syllabus and curriculum.

d. Learning environment

i. The training centre/network **should** encourage a culture in which trainees feel safe and are willing to receive feedback.

e. Educational methods

i. With reference to the HERMES Curriculum, teaching in the clinical setting requires a learning partnership between supervisor and trainee, based on modern workplace based learning. Key considerations for the educator would be:

   1. Ensuring that trainees actively observe others in clinical settings in order to see, analyse and interpret all that occurs.
   2. Helping trainees to engage in clinical practice at a level appropriate to their experience and needs.
   3. Ensuring an ongoing dialogue, both within and outside the clinical setting, between educator and trainee.
   4. Encouraging problem solving by the trainee in a range of different clinical settings.

ii. The full range of modern educational/assessment methods **should** be considered. The following list sums up methods that are most used, but other methods can be considered as well. It is suggested that each training centre has a list of all methods used, with their definitions.

Educational methods
Bedside/ward teaching
Case-based discussion
E-Learning
Feedback on letters: assessment instrument for letters
Grand rounds/departmental meetings /teaching
Morning rounds
Operating theatre environments
Out-patient clinics
Peer-based learning
Self-directed learning
Patient presentations/testimony to trainees
Simulations (simulator use for technical skills, simulation of clinical scenarios, etc.)

f. Assessment methods

i. These serve a public function of accrediting a doctor's practice and its results can be used in three important ways according to the HERMES Curriculum rationale:

1. For monitoring progress in learning (also known as *formative assessment*)
2. For accreditation (*summative assessment*)
3. For selection (*e.g*. into a training programme, to determine progression through a training programme, and for posts following completion of a training programme).

ii. The full range of modern assessment methods **should** be considered. The following list sums up methods that are most used, but other methods can be considered as well. It is suggested that each hospital has a list of all methods used, with their definitions.

Assessment toolbox (*)
Written assessments (knowledge tests, MCQ, short essay questions)
Audit
Case based discussion
Direct observation of practical skills (DOPS)
Feedback on letters: assessment instrument for letters
Mini-clinical evaluation exercise (MiniCEX)
Multi source feedback
Objective structured clinical examination (OSCE)
Oral examination
Other options for example simulation and standardised patients
Feedback from patients
Portfolio (electronic or paper-based)

iii. It is r**ecommended** that the training centres/network consider the educational methods and formative assessments as described in the assessment tools, level and environment model proposed in Appendix 1(*).

iv. Trainees **should** be encouraged to aim at obtaining the HERMES diploma in adult respiratory medicine. During the training programme, it is **recommended** that trainees sit the HERMES examination as an in-training assessment at least once during their training.

v. It is **mandatory** that the trainee undergoes an annual review of their progress with his/her educational and clinical supervisor and/or programme director which **should** be within a structured framework that includes performance feedback from the programme director.

vi. Training centres/networks **should** have a method in place to receive feedback from patients on the quality of the interaction with trainees.

g. Level of supervision

i. The training centre/network **must** ensure that, over the course of their training period, trainees assume increasing clinical responsibility, appropriate to their overall level of competence.

ii. The training centre/network **must** be of a sufficiently high standard to allow trainees to attain the levels of supervision/independence set forth in the syllabus.

1. Level 1: Awareness sufficient to recognise and know when to refer.
2. Level 2: Knowledge sufficient to manage with supervision (or refer).
3. Level 3: Advanced knowledge sufficient for independent specialist practice.

** see appendix 1 - Assessments in Medical Education: Definitions*

SECTION 5: CONTENT OF RESEARCH / SCIENTIFIC EXPERIENCE

a. The training centre/network **must** provide a list of its 15 best publications in the last 5 years and evidence of continuous research or scientific activities.

b. Trainees **should** be encouraged to take part in these research and publications.

c. The training centre/network **should** provide opportunities for trainees to plan, conduct, evaluate and publish research (*e.g.* each trainee **should** have presented at least one oral poster in an international congress by the end of training).

d. At least one faculty or management member **should** have taken part in a CME activity or event accredited by the UEMS/EBAP, either as a participant, speaker, chair or member of the scientific/organising committee.

SECTION 6: INFRASTRUCTURE AND SUPPORT FOR TRAINEES

The training centre/network **must** ensure the availability of adequate resources for trainee education:

1. Educational facilities

a. Space and equipment

i. There **must** be adequate space and equipment to cope with the requirements of the educational programme, including meeting rooms, computers with internet access, visual

and other educational aids and work/study space. A minimum of one desk per trainee and one computer per 2 trainees **is recommended**.

ii. The training centre/network **must** provide adequate and timely medical information access to specialty-specific and other appropriate print, electronic and web-based reference materials. This **must** include local protocols and guidelines.

2. Clinical support facilities

a. The training centre/network **must** ensure the availability of adequate resources to support trainees' clinical experience, in both in- and out-patient settings:

i. The trainees **should** be given access to medical records, including imaging, laboratory and pathological reports for both inpatient and ambulatory care patient population.

ii. Images from chest radiograph, CT scans, nuclear scans, MRI *etc*. which are of sufficient quality **must** be readily available to act as occasion demands.

iii. When trainees are assigned night duty or on call, they **must** be provided with adequate facilities according to national regulations.

3. Clerical support

a. The training centre/network **must** ensure the availability of adequate secretarial and administrative support to meet the needs and demands as judged by the trainee, teaching faculty and programme director.

SECTION 7: ORGANISATION OF TRAINING PROGRAMME

This section describes functions and roles in the organisation of a training programme important for achieving high quality training. Exact structure and titles can vary from country to country.

Positions can carry other names. Furthermore, numerous responsibilities can be attributed to a single position depending on the size and structure of the local programme.

Each programme **must** be supervised by a single programme director who has the authority and accountability for the operation of the entire programme.

The programme **must** ensure adequate numbers of both educational and clinical supervisors.

1. Programme director

a. Qualifications **must** include:

i. Certified specialist recognised by relevant national authority
ii. Certified as a training specialist

b. In addition, the programme director **should**:

i. Have a scientific background
ii. Have produced original research
iii. Have peer- reviewed research publications

c. Administrative responsibilities **must** include the following:

i. Overseeing and ensure the efficient management and quality of the training programme

ii. Supervising and guarantee quality of didactic and clinical education at all certified European training centre networks
iii. Approving the educational supervisor of the training centre or at each participating site of the training centre network
iv. Ensuring the quality of educational and clinical supervisors
v. Coordinating the monitoring of trainee supervision
vi. Ensuring there is a mechanism to review trainees at least once or twice a year, through a formative assessment with written feedback to the trainee
vii. Ensuring that there are mechanisms for trainees to raise grievances
viii. Implementing policies and procedures (may refer to a separate list of policies and procedures)

2. Teaching faculty

a. Educational Supervisor

i. Qualifications **must** include:

1. Certified and practising specialist
2. Strong interest and commitment to education
3. Commitment to keeping up to date and maintaining CME/CPD as per national requirements
4. Scientific background, involvement in original research and peer-reviewed research publications

ii. Responsibilities **must** include the following:

1. Overseeing the progress of the trainee throughout the entire training programme
2. Conducting regular formal and documented appraisals with the trainee
3. Commenting on the educational progress of the trainee in the trainee's portfolio
4. Providing feedback on assessments and general progress of the trainee
5. Reviewing of trainee appraisals and overall progress, and for those trainees experiencing difficulty, liaise with colleagues including the clinical supervisor to address concerns and provide additional professional support to the trainee where necessary
6. Overseeing the personal and professional development of the trainee

b. Clinical Supervisor

i. Qualifications of the clinical supervisor **must** include:

1. Certified and practicing specialist
2. Commitment to keeping up to date and maintaining CME/CPD as per national requirements

ii. In addition, the clinical supervisor **should**:

1. Have a scientific background
2. Be an author of original research and peer-reviewed research publications

iii. Clinical supervisor responsibilities **should** include the following:

1. Responsibility for the continuous observation of trainee's assigned clinical work
2. Ensuring assigned trainees abide with best practice in safety and clinical standards of care

3. Delegating appropriate levels of responsibility and ensure adequate supervision and support is available
4. Identifying any concerns or problem areas relating to the trainee and if necessary follow up with educational supervisor
5. Monitoring and record progress and solicit feedback on a regular basis to ensure practice improvement and ongoing professional development
6. Providing progress reports as requested or scheduled by the educational supervisor or programme director

NB: Depending on the size and structure of the training programme, educational supervisor and clinical supervisor's roles can be shouldered by one and the same person.

3. Other organisational issues

a. Minimum numbers of training personnel

   i. The training centre/network **must** provide at least 2 full time equivalents (FTE) of certified specialists involved in medical training.

b. Minimum number of trainees

   i. The training centre/network **should** provide at least one FTE position of trainee for each year of the training duration, averaged out over the whole training duration (*i.e*. 3 FTEs for a 3-year training programme).

c. Duty hours and personal responsibility

   i. Duty hours **should** conform to the local regulations of the host country.

   ii. Trainees **should** be made aware of their responsibilities with regards to continuity of care of patients.

d. Other educational opportunities

   i. The training centre/network **must** provide other additional educational activities such as rounds (colloquia), conferences, journal club, mortality and morbidity reviews and autopsies, and multidisciplinary meetings.

   ii. Trainees **must** be given opportunity to take part in teaching activities and external educational activities.

4. Multidisciplinary approach

a. The training centre/network **must** ensure smooth collaboration with other units, such as:

   1. All disciplines of internal medicine
   2. Anaesthesiology
   3. Biochemistry
   4. Immunology
   5. Lung transplantation
   6. Microbiology
   7. Neurology
   8. Occupational medicine
   9. Oncology
   10. Ophthalmology

11. Otorhinolaryngology
12. Paediatrics
13. Palliative care
14. Pathology
15. Physical medicine
16. Radiology
17. Radiotherapy
18. Rehabilitation
19. Sleep
20. Thoracic surgery

b. The training centre/network **must** ensure smooth collaboration with other professionals, such as:

i. Allied health care professionals including:

1. Nurse specialists
2. Physiotherapists
3. Respiratory technicians
4. Speech therapists
5. Nutritionists
6. Psychologists

ii. Other specialists

c. The training centre/network **should** ensure smooth collaboration with other care units such as:

1. Primary care
2. Home care/early discharge (curriculum module 24)
3. Psycho-social care (curriculum module 32)
4. Other health care units

SECTION 8: REQUIREMENTS FOR SPECIFIC FACILITIES

The training centre/network **must** provide all facilities necessary to ensure that trainees experience adequate clinical experience and first-hand exposure to a wide range of techniques and procedures, as listed below.

Please refer to the HERMES syllabus [3] and HERMES curriculum [2].

Techniques and Procedures	Syllabus Item	Curriculum
Imaging techniques	D.2, D.3	26
Pulmonary function testing	D.1 (including sleep studies)	27
Interventional pneumology	D.2, E.1	28, 29
Therapeutic interventions such as oxygen supplementation, non-invasive ventilation	E.1.5, E.1.6	24

Intensive care and high-dependency care (inter- mediate care including weaning)	G.1, G.2	22
Sleep-related disorders, including sleep studies	B.19	18
Tobacco dependence treatment service	E.1.19	21
Palliative care and long-term care	E.1.13	25

a. Indicative numbers

i. Practical experience and first-hand exposure are crucial in the learning of techniques. The below tables provide training centres with guidelines on **the expected minimum number of procedures, a learner should be exposed to during the entire duration of his/her adult respiratory medicine training** to attain the required level of competence.

ii. In completing the prescribed numbers it is recognised that trainees will go through a varied process of observation, simulation, supervised and independent practice of the procedure in order to advance from novice to competent practitioner during the training period.

iii. It is however recognised that in some countries, the stated numbers may be difficult to achieve for some techniques due to the organisation of care and availability of facilities. However, trainee rotation through reference training centres and training centre networks offers an opportunity for most trainees in Europe to achieve these aims.

iv. It is recommended that exposure to these procedures should be documented in the trainees' portfolio.

1. Indicative numbers for lung function testing

Syllabus item	Procedure	Indicative number
D.1.1	Static and dynamic lung volumes/interpretation and performance	>100
D.1.2	Body plethysmography interpretation	>100
D.1.3	Gas transfer interpretation	>100
D.1.4	Blood gas assessment and oximetry interpretation and performance	>100
D.1.5	Bronchial provocation testing-interpretation and performance	50
D.1.6	Exercise testing including walking tests and spiroergometry (cardio-pulmonary exercise testing)	>100
D.1.12	Sleep studies interpretation and performance (polygraphy or polysomnography)	50

2. Indicative numbers for other procedures

Syllabus item	Procedure	Indicative number
D.2.5	TB-screen testing/IGRA	25
D.2.6	Allergy skin testing	50
D.2.7	Pleural ultrasound imaging	>100
D.2.8 D.2.9 D.2.19 D.2.20	Thoracentesis Closed pleural needle biopsy Percutaneous needle biopsy Fine needle biopsy	100
D.2.10	Medical thoracoscopy	10
D.2.11	Flexible bronchoscopy	100
D.2.15 D.2.12 D.2.13 D.2.14	Broncho-alveolar lavage Transbronchial lung biopsy Transbronchial needle aspiration Endobronchial ultrasound	50
D.2.18 D.2.17	Exposure to Interventional bronchoscopy techniques including fluorescence bronchoscopy, brachy-therapy, endobronchial radiotherapy, after loading laser and electrocoagulation cryotherapy, photodynamic therapy, airway stents, endoscopic lung-volume reduction and rigid bronchoscopy	50
E.1.11	Pleurodesis and pleural drain insertion	100

3. Indicative numbers for procedures performed collaboratively

Syllabus item	Procedure	Indicative
D.3.1	Thoracic imaging (X-Ray, CT, MRI)	>100
D.3.2	Nuclear medicine techniques (pulmonary and bone scan, PET)	100

To calculate the minimum number of procedures per year, each training centre should then apply the following formula: multiply the indicative number by the number of trainees enrolled in their training programme, and then divide by the number of years of training to obtain a number of procedures per year:

Formula:

1. (Min No of Procedures × No of trainees) ÷ No yrs. of training
2. *e.g.* static and dynamic lung volumes/interpretation and performance: >100
3. Enrolled trainees: 6 (2 per year)
4. Years of training: 3
5. (100×6) ÷3 = 200 Static and dynamic lung volumes/interpretation and performance per year for the whole training centre.

SECTION 9: ACCREDITATION PROCEDURES AND PROCESS

1. Accrediting body

a. The EBAP (*European Board for Accreditation in Pneumology*) is the accrediting body which oversees the accreditation process. The accreditation is a quality assurance process for which the criteria and minimum conditions described in this document are evaluated.

b. Accreditation is granted if all basic criteria are met and minimum conditions are being followed and implemented.

2. Step 1: Qualification - overview

The training centre /network must confirm their interest in taking part in the process by completing a formal statement of interest and send this to the accreditation body:

EBAP
Ave Ste-Luce 4
1003 Lausanne
Switzerland

The Training centre will receive all necessary documents and templates to apply for ***Step 1: Qualification***.

Step one of the accreditation process is a self-reporting process. The training centre/network must provide EBAP with the following documents, in order for the review team to ensure the centre / network complies with all basic standards as described in the accreditation criteria.

Documents to be provided include:

a. Completed application form, including data pertinent to:

   i. Training Centre
   ii. If part of a network: data on partner training centres
   iii. Programme director
   iv. Teaching faculty
   v. Educational supervisor
   vi. Clinical supervisor
   vii. Trainees
   viii. Training programme, including curriculum and rotation plan
   ix. Detailed information linked to the accreditation criteria

b. Additional documents, including:

   i. Programme director CV and list of 10 latest publications in English
   ii. Clinical/educational supervisor CVs and list of 10 latest publications in English
   iii. Completed *Syllabus Comparison Training Centre vs HERMES* spreadsheet
   iv. Full curricula in English
   v. Education and clinical programme (weekly timetables) in English
   vi. Trainee rotation plan in English
   vii. List and contact details of people involved in the site visit, including teaching faculty, clinical/educational supervisor(s) and trainees

   These documents will be reviewed by a team of reviewers and a report will be issued to the training centre, highlighting areas for improvement. Only training centres/networks complying

with all basic standards as defined in the accreditation criteria document will be able to undertake ***step 2: site visit***.

3. Step 2: Site visit - overview

The step two of this process is the site visit [5] [6] by the same team of reviewers who assessed the training centre application.

The following information must be made available to the review team:

a. Documents to be provided to the training centre in preparation of (before) the site visit:

   i. Completed data collection forms: These questionnaires request detailed information related to the accreditation criteria and must be completed by the programme director, teaching faculty, educational/clinical supervisor(s) and trainees prior to the site visit. This will be used as the basis for the interviews conducted onsite by the review team.
   ii. In- and out-patient statistics
   iii. Audit reports
   iv. Example of logbooks
   v. Internal evaluation forms

b. Documents to be made available to the review team during the site visit:

   i. Standards, guidelines, protocols and objectives
   ii. Incident reports
   iii. Annual report
   iv. MoU with secondary training centres (if part of a training centre network)

c. The visiting team is composed of 3 members, i.e.:

   i. Two internationally recognised experts, one appointed by the ERS, one by EBAP.
   ii. One national expert, who preferably has been involved in the local accreditation of the training centre or a UEMS representative who will have a facilitator role in the site visit process.
   iii. One member of EBAP staff, whose role will be to record the site visit proceedings.

d. Site visit activities include:

   i. Visual inspections of the facilities
   ii. Interviews with the programme director, teaching faculty, educational/clinical supervisor(s) and trainees.

e. The review team reports to the joint *Training Centre Accreditation Committee* for final decision.

4. Site visit: Preparation and onsite processes

a. Once the Review Committee has agreed that the site visit can be performed, a suitable date must be convened with the training centre/network and reviewers.

b. The office will liaise with the training centre/network to prepare for the site visit and agree on a site visit agenda and select 3-5 trainees to be interviewed.

c. The office will contact the training director, faculty, clinical/educational supervisor and selected trainees and ask them to complete their relevant data collection forms. These forms must be returned directly to the office, to ensure fairness and independence of the responses.

d. The office will collate all necessary documents from the training centre/network and forward a complete file to the reviewers, including:

    i. All application documents
    ii. Completed data collection forms
    iii. Any additional document provided by the training centre/network, such as:

        1. A check-list specifically highlighting areas to be assessed in onsite, depending on areas of improvement highlighted from the qualification phase
        2. The marking sheet document completed during the qualification phase
        3. A copy of the report from the qualification phase

e. The reviewers travel to the location, arriving ideally in the afternoon or early evening of the day before the site visit. The evening can be used for preliminary discussions and preparation for the site visit and interview.

f. The site visit lasts 1.5-2 days and starts in the morning with the prescribed activities:

    i. Meeting with Training centre director
    ii. Guided visit with premises and facilities
    iii. Discussion of data in questionnaires with training director and permanent staff
    iv. Discussion of training program with present and/or past trainees of the centre
    v. Reviewers meeting to discuss impressions and draft essential parts of centre visitation report
    vi. Review team members leave the centre in the afternoon or evening of the second day.

g. The review team sends a finalised report to EBAP's headquarters to be forwarded to the *Training Centre Accreditation Committee* for approval.

5. Site visit report

Once approved by the *Training Centre Accreditation Committee*, the site visit report, duly signed by the members of the review team is sent to the training centre/network.

6. Certificate of accreditation

Based on the result of the site visit and subsequent report, an accreditation certificate is issued if the training centre/network has successfully passed the assessment. The certificate is valid for five years.

7. Certification renewal

The Training Centre/network is responsible to initiate the request for their certification renewal. It is recommended that this is started 6 months prior to the end date of the certification.

Depending on the result of the previous site visit, the Review Committee and Training Centre Accreditation Committee may decide that a new site visit is performed.

8. Roles

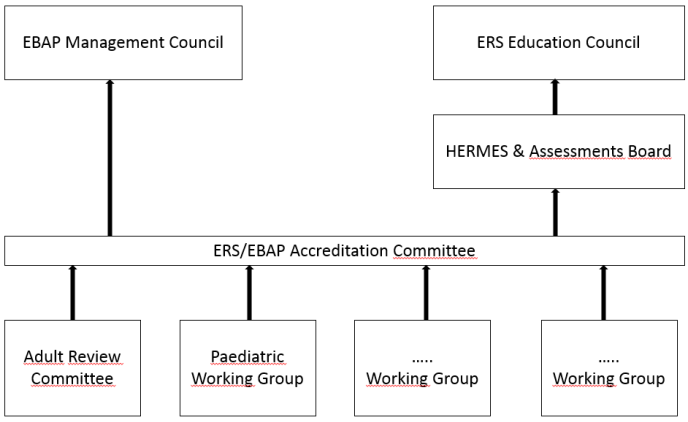
a. Training Centre Accreditation Committee

The Accreditation Committee is elected by the ERS Education Council and EBAP Management Council and acts as an independent body regarding the accreditation of the training centres across

respiratory medicine sub-specialties. It is the final authority on all decisions relating to training centre accreditation status. This committee is made up of internationally acknowledged experts.

The Training Centre Accreditation Committee Chairs are the ERS Education Council Chair and EBAP President.

The Training Centre Accreditation Committee reports to the ERS HERMES and Assessments Board and ERS Education Council as well as to EBAP Management Council.



a. Training Centre Review Committee

The Training Centre Review Committee consists of international or national experts appointed by the ERS and EBAP.

EBAP and ERS each appoint one co-chair of the Training Centre Review Committee. Both are also members of the Training Centre Accreditation Committee and their role is to be the link between both committees.

The Training Centre Review Committee formally reports to the Training Centre Accreditation Committee.

b. Administration

All administrative aspects of the training accreditation process, including the support to reviewers during the site visit is performed by EBAP. Responsibilities include, but are not limited to:

1. Promoting the accreditation program, including website visibility, mass e-mailing, brochures and communications in national and international meetings.
2. Receiving and checking requests for accreditation
3. Liaising with the Review Committee to assign reviewers
4. Support reviewers in their assessment process
5. Coordinate the organisation of the site visits with centres and reviewers
6. At each step of the process, invoice the training centres accordingly for:
    - Step 1: Qualification fees
    - Step 2: Site visit fees
    - Site visit review team travel costs
7. Ensure payment of honoraria to reviewers

8. Assist the review team onsite, including the recording of proceedings and interviews, visual inspection results and reports.
9. Liaise with the Review Committee and Accreditation Committee for final decision
10. Send certificates to accredited training centres/networks
11. Maintain a visible website featuring accredited centres/networks
12. Maintain a network of Accredited Training Centres.
13. Ensure regular revision, validation and update of the accreditation criteria, following best practice in medical education.
14. Support the Accreditation Committee and Review Committee with the organisation of their meetings.

9. Registry of Accredited Training Centres

Upon receipt of the certificate, the training centre/network will be added to an accredited training centre registry and will belong to a group with activities geared towards sharing best practices and standards.

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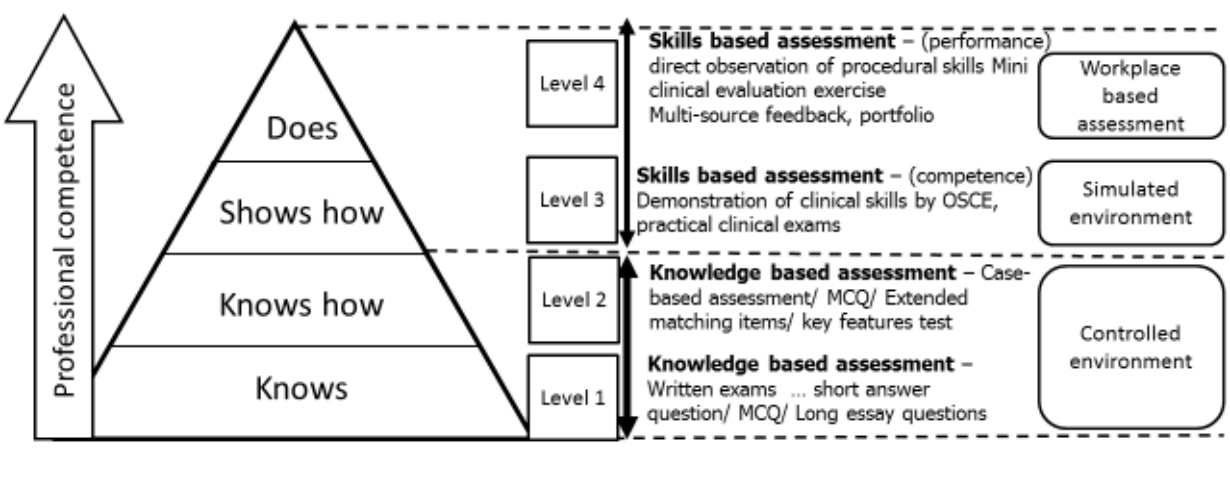
APPENDIX 1 - ASSESSMENTS IN MEDICAL EDUCATION: DEFINITIONS

1. Assessment tools, level and environment

Below are provided the assessment levels as described by Miller [7].



2. Assessment of 'Knows' and 'Knows How' (Level 1 & 2)

We list, for each assessment level, the corresponding assessment tools [8]. Any skill however requires to be assessed by multiple assessment tools.

a. Oral examination

In an oral examination, a candidate faces one or more examiners who ask questions. Examiners must use a blueprint to select content area and a structured marking scheme. Often, oral examinations are conducted in conjunction with long and short cases.

b. Long essay questions (LEQ)

Typically, a long essay is a piece of prose that varies in length from several paragraphs to several pages. The question stem often contains a phrase such as: `Describe the management of ...'.

c. Short answer question (SAQ)

A practical alternative to the long essay question, the short answer question is an open ended, semi-structured question format. A structured, pre-determined marking scheme improves objectivity. The questions can incorporate clinical scenarios. A similar format is known as modified essay question (MEQ) or constructed response question (CRQ).

d. Multiple choice questions (MCQ)

The MCQ is a restricted response, objective assessment instrument. It contains:

1. A stem or a description of a problem
2. Lead-in or the question, and
3. Option list

e. Extended matching items (EMI)

EMI is a relatively new format of objective testing which is somewhat similar to the MCQ, except that is based on a single theme and has a long option to avoid cuing. It is also known as extended matching question (EMQ).

f. Key features test (KF)

The KF, initially developed by the Medical Council of Canada (MCC), for its licensing examination, is a clinical scenario-based paper and pencil test. A description of the problem is followed by a limited number of questions, usually two to three, which focus only on critical, challenging actions and decisions [9]. Both write-in and short-menu formats can be used in the answer scripts. In the MCC licensing examination, the KF is implemented along with the more conventional MCQ.

3. Assessment of 'Shows How' (Level 3)

a. Long case

Involves the use of a non-standardized real patient. The candidate is usually assessed on one long case and three to four short cases with oral examination. The candidate may or may not be observed during the examination.

b. Short case

Involves the use of three to four non-standardized real patients with one to two examiners. Usually there is a common marking scheme for all the cases.

c. Objective structured clinical examination (OSCE)

OSCE consists of multiple stations (usually 15-20) where each candidate is asked to perform a defined task such as taking a focused history or performing a focused examination of a particular system. A standardised marking scheme specific for each case is used.

4. Assessment of 'Does' (Level 4)

a. Mini clinical evaluation exercise (Mini-CEX)

Mini-CEX is a rating scale developed by the American Board of Internal Medicine (ABIM) in the 1990's to assess six core competencies of residents. These are:

1. Medical intervention skills
2. Physical examination skills
3. Humanistic qualities/professionalism
4. Clinical judgement
5. Counselling skills
6. Organisation and efficiency

b. Direct observation of procedural skills (DOPS)

DOPS is a structured rating scale for assessing and providing feedback on practical procedures. DOPS is similar to mini-CEX except that the domains of interest are related to practical problems.

c. Clinical work sampling (CWS)

CWS is an in-trainee evaluation method. Like the mini-CEX and DOPS, the CWS addresses the issue of system and rater biases by collecting data on observed behaviour at the time of actual

performance and by using multiple observers and occasions. Like the mini-CEX and DOPS, there is an opportunity to provide feedback to the student and trainee.

d. Checklist

Checklists are commonly used in assessments to capture an observed behaviour or action of a student. Generally, rating is by a five to seven point Likert Scale. Checklists are usually used at the end of clinical rotations.

e. 360-Degree evaluation or Multi Source Feedback (MSF)

A 360-Degree evaluation consists of measurement tools completed by multiple individuals in a person's sphere of influence. Usually, it assesses how frequently a behaviour or an action is performed by a candidate using a rating scale. The observation is done by several individuals, and generally includes the supervising physicians, peers, nurses and sometimes patients. The domain of competency assessed by this evaluation is generally restricted to aspects of observable behaviour such as communication skills, interpersonal relationship and other from a similar sphere.

f. Logbook

The candidate keeps a track record of the patients seen or procedures performed either in a book or in a computer. The program may or may not have a defined target (e.g. number of procedures to be performed, types and number of cases to be seen) for the candidate.

g. Portfolio

A portfolio is a collection of one's professional and personal goals, achievements, and methods of achieving these goals [10]. It may contain items such as one's best essays, written or research projects, logbooks, letter of reflection and evidence of professional growth, to support individual accomplishment and progression [11]. We can also use it to collect assessment forms and exam results.