

## STATEMENT ON TRAINING IN PNEUMOLOGY

# Report of the working party of the "UEMS Monospeciality Section on Pneumology" on training requirements and facilities in Europe

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In the course of the free exchange of goods, services and persons within the European Common Market, the Pneumology Section of the European Union of Monospecialists (UEMS) spent many years in drawing up an inventory of the training programmes for pneumologists in the member countries. There was agreement about the areas of training, but considerable differences existed between member countries concerning the total length of training, especially the duration of the common trunk ("*truncus communis*") versus the period of specific training in pneumology.

In order to establish a common position towards the optimal duration and content of the training of European pneumologists, a working party met at Leiden on 21-23 February 1990 (Dijkman (The Netherlands), Martinez Gonzales del Rio (Spain), Loddenkemper (Germany), Prowse (UK), and Siafakas (Greece)). The report, presented below, was discussed and accepted in the UEMS Pneumology Section and in the European School of Respiratory Medicine, and has recently been approved by UEMS and ERS.

### European Pneumology Training Programme

It was generally agreed that specialist training in pneumology should begin after completion of a common base of training in internal medicine; thus preserving the link with other subspecialities of internal medicine. The optimal length of the "*truncus communis*" should be 3 yrs after completion of internship. However, it is recognized that the duration of medical school training varies between European countries, and that the length of internship (compulsory postdegree training) also varies from 1-3 yrs. Although the optimum length of the "*truncus communis*" is 3 yrs, those countries which have a longer period of internship may be able to accept only a 2 yrs "*truncus communis*", but will achieve the same end by virtue of the longer duration of the internship. In the attached scheme, the recommended "*truncus communis*" should therefore, be interpreted with the concept of a total 10 yrs of non-specialist training (fig. 1).

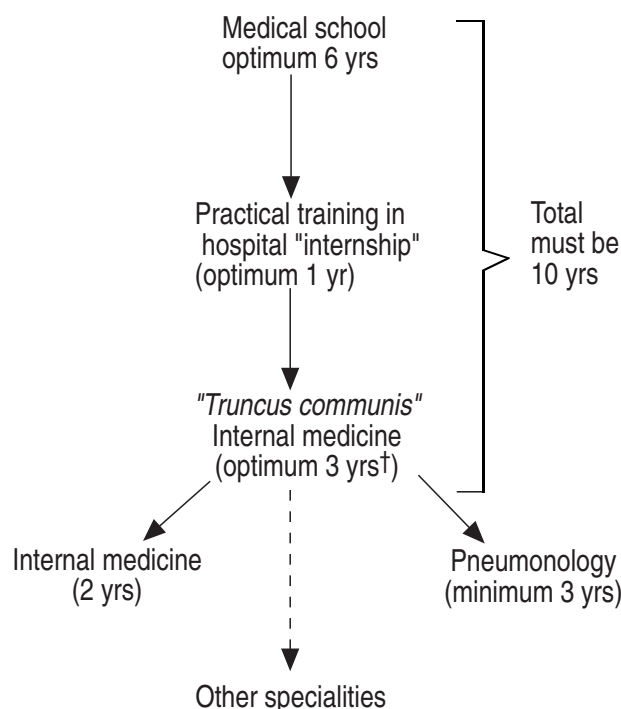


Fig. 1. - Proposal for a standardized European Pneumology Training Programme. †: 6 months of these may be spent in pneumology training or research, a minimum of four months should be spent in Cardiology and a period of four months may be spent in Intensive Care during the "*truncus communis*".

### 1. Specific training in pneumology

#### Strategy

The doctor in training should, at the end of his or her training as a pneumologist, have gained broad theoretical and scientific knowledge of respiratory disease and of conditions affecting the lung, as well as having a wide clinical experience. After training, the doctor should be able to make independent decisions within all areas concerning respiratory disease, and to take care of both acute and electively referred patients. At the end of training, the doctor should be able to initiate and to advise upon research projects relevant to the speciality and to participate as a tutor and teacher in the field.

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*"Truncus communis"*

The minimum length of training in internal medicine (the *"truncus communis"*) should be 3 yrs. During this period, the trainee will be exposed to all aspects of medicine and its subspecialties, including particular attention to the care of the acutely ill. This period should not include more than six months spent in the speciality of pneumology. It may include a period of time in intensive care, but experience in this field may also be gained during speciality training. The *"truncus communis"* should include a minimum period of four months in Cardiology.

**2. General***Specific requirements for pneumology*

The educational programme shall be not less than 3 yrs in duration, and during this time a period of not longer than six months may be spent in research. The purpose of the education programme is to provide training and experience at a sufficient level for the trainee to acquire the competence of a specialist in the field. Clinical experience must include opportunities to observe and manage patients with a wide variety of lung diseases, both as in-patients and out-patients. The trainee must have the opportunity to assume continuing responsibility for both acute and chronically ill patients, in order to learn and appreciate the natural history of lung disease, as well as the effectiveness of treatment. The programme will include emphasis on pulmonary physiology and its correlation with clinical disorders. The utilization of laboratory tests and familiarity with radiological studies and radionuclide procedures for the diagnosis and treatment of lung diseases are an essential part of the programme.

**3. Facilities and resources**

Training Centres should have at least two specialists in pneumology. The specialist in direct charge of training in respiratory medicine or the Head of the Department of Respiratory Medicine will normally be in a full-time position. Facilities to accomplish the overall educational programme must be available, and these include in-patient and ambulatory care facilities, a laboratory for lung function tests, facilities for the learning and performance of bronchoscopy, and extensive pathological services, including facilities for exfoliative cytology. Appropriate space and staffing for pulmonary procedures must be available.

Close liaison with intensive care units, postoperative care units, and respiratory care services must be available. There should also be a close liaison with other services, including paediatrics, radiology, pathology, thoracic surgery, microbiology, biochemistry and immunology. Where possible, there should also be a

close liaison with occupational medicine, physiology, physiotherapy and rehabilitation, as well as a working relationship with otorhinolaryngology (ENT) and anaesthesiology.

**4. Specific programme content**

The training programme must provide the environment and resources for trainees to develop clinical competence in the field of respiratory diseases.

*Knowledge of diseases*

The programme must provide the environment and resources for training needs to acquire knowledge of a broad spectrum of lung diseases, including but not limited to, the following:

1. obstructive lung diseases including asthma, bronchitis, emphysema, bronchiectasis and cystic fibrosis;
2. malignant disease of the lung, pleura and mediastinum, both primary and metastatic;
3. tuberculosis, both pulmonary and extra pulmonary, and including all aspects of management, epidemiology and prevention;
4. other pulmonary infections, including fungal infections, and those in the immunocompromised host; specific attention should be given to patients with human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) infections;
5. diffuse interstitial lung disease;
6. pulmonary vascular disease, including primary and secondary pulmonary hypertension, the vasculitides and pulmonary haemorrhage syndrome;
7. occupational and environmental lung disease, particularly diseases due to dust inhalation, asbestos-related diseases, and occupational asthma;
8. iatrogenic respiratory disease, including drug-induced disease;
9. acute lung injury including radiation, inhalation and trauma;
10. pleuropulmonary manifestations of systemic diseases, including collagen vascular disorders, and diseases which are primary in other organs;
11. respiratory failure, including the adult respiratory distress syndrome, acute and chronic respiratory failure in obstructive lung diseases, neuromuscular respiratory drive disorders, and respiratory failure arising from thoracic wall abnormalities;
12. disorders of the pleura and mediastinum, including pneumothorax and empyema thoracis;
13. genetic and developmental disorders of the respiratory system;
14. allergic diseases of the respiratory system, including asthma, hypersensitivity, hyperreactivity, and environmental allergic factors;
15. sleep-disordered breathing and related conditions, including sleep apnoea syndrome;
16. prevention of respiratory diseases;
17. rehabilitation of patients with lung disease.

*Performance of procedures and techniques*

The programme must provide the environment and resources for the trainee to acquire knowledge of and competence in the performance of the following:

1. pulmonary function tests to assess respiratory mechanics and gas exchange, including spirometry, flow volume studies, lung volumes, (including body plethysmography) transfer factor (diffusing capacity), distribution of ventilation, airways resistance, arterial blood gas analysis and exercise studies;
2. diagnostic and therapeutic procedures, including thoracentesis, pleural biopsy, percutaneous needle aspiration, insertion of chest drains, flexible fiberoptic bronchoscopy and related procedures, endotracheal intubation, percutaneous arterial puncture and cannulation and central venous catheterization;
3. ventilatory support, weaning and respiratory care techniques.

*Knowledge and interpretation of other studies*

The programme must provide the environment and resources for the trainees to acquire knowledge of and the ability to interpret the following:

1. radiological imaging procedures, including chest X-rays, tomograms, computed axial tomograms, radionuclide scans, bronchograms, pulmonary angiograms, ultrasound techniques, and other radiological procedures;
2. sleep studies, including the assessment of sleep apnoea and of patients requiring domiciliary home ventilation;
3. inhalation challenge studies, skin tests and immunological tests, particularly related to respiratory allergy;
4. complex lung function tests, such as body plethysmography, lung compliance and exercise studies;
5. the calibration and operation of haemodynamic recording systems;
6. pulmonary artery balloon flotation and catheterization;
7. examination and interpretation of sputum, bronchopulmonary secretions, pleural fluid/tissue, and lung tissue for infectious agents, cytology and histopathology.

*Experience of other fields*

It is important that the trainee should acquire knowledge and have close liaison with a number of other specific fields, and where possible should gain practical experience in these fields. These include:

1. *Intensive care.* All trainees must gain some experience in intensive care, preferably by spending a period of four months attached to an intensive care unit. This period of training can be undertaken as part of the "*truncus communis*" or as part of the speciality programme.

2. *Thoracic surgery.* It is essential that the trainee should work in close liaison with and obtain knowledge and experience from thoracic surgeons. This includes the knowledge of preoperative and postoperative care. Where there exists a centre specializing in lung surgery, rotation of the trainee to that service for a short period (2–3 months) should be encouraged.

3. *Radiotherapy and oncology.* There should be a close liaison and the trainee should acquire knowledge and practical experience in the management of lung cancer, including chemotherapy.

4. *Physiotherapy.* With particular reference to respiratory disorders.

*Clinical competence and experience of further procedures*

It is desirable that the training programme provides the environment and resources for the trainee to develop clinical competence and experience of performing the following:

1. thoracoscopy;
2. rigid tube bronchoscopy;
3. endobronchial therapy.

*Research*

It is desirable that all trainees in pneumology should participate in research. Time should be made available during the training programme for the trainee to develop and pursue his own research projects within the ambit of the training department. In addition to the 3 yrs clinical training programme, there should ideally be a further year spent in research activity. The timing of this research year will be variable.

*Teaching*

During the course of training, it is also desirable that the trainee should gain experience of teaching students or more junior trainees, and should receive advice on teaching and its organization.

**5. Control of education programme**

It was agreed that the quality of the training programme and content, as well as of the trainee, could be guaranteed by peer supervision of the training centre. This will require the setting up of a mechanism, whereby there can be periodic supervision of the departments and their facilities, either within countries or between countries. Ideally, such a mechanism should include a qualified specialist from outside the country in which the training centre is based. Training posts would be approved for 3–5 yrs, and renewal of approval will depend on subsequent reviews.

## 6. Outstanding points

The question of European examination was discussed. It was felt that it would be difficult to achieve at present, largely because of the differences in training programme between the different European countries, even when the programmes would fall within the guidelines set out above. We believe that perhaps ultimately the mixture of a common examination on theory with inspection of the training programme might be evolved, but such a move would have to be in step with other European specialities. We envisage that

any such examination would, for practical reasons, be theoretical, and probably in the form of a multiple choice examination administered on a Europe-wide basis.

We also discussed the possible need for the trainee to maintain a "log book". Such a book could indicate the number of technical procedures performed under supervision, or, by means of signature by the head of department, confirm that various aspects of training had been undertaken. In general, however, it was felt that the proper control of the training centre would obviate the need for this.