COUNCIL OF EUROPE
COMMITTEE OF MINISTERS

RECOMMENDATION No. R (85) 5

OF THE COMMITTEE OF MINISTERS TO MEMBER STATES

ON A MODEL CURRICULUM FOR THE TRAINING OF SPECIALISTS IN BLOOD TRANSFUSION

(Adopted by the Committee of Ministers on 26 March 1985 at the 382nd meeting of the Ministers' Deputies)

The Committee of Ministers, under the terms of Article 15.*b* of the Statute of the Council of Europe,

Whereas the aim of the Council of Europe is to achieve a greater unity between its members and that this aim can be pursued, among other ways, by the adoption of common action in matters of health ;

Calling to mind its Resolution (78) 29 on harmonisation of legislation of member states relating to removal, grafting and transplantation of human substances ;

Further calling to mind its Recommendations Nos. R (80) 5 concerning blood products for the treatment of haemophiliacs, R (81) 5 concerning the antenatal administration of andi-D immunoglobulin, R (81) 14 on preventing the transmission of infectious diseases in the international transfer of blood, its components and derivatives, and R (83) 8 on the prevention of the possible transmission of acquired immune deficiency syndrome (AIDS) from affected blood donors to patients receiving blood or blood products ;

Pointing to the present rapid tendency for the clinical demand for blood products to increase and to the development of biotechnical methods of haemotherapy ;

Noting on the basis of a recent study of the situation of health services in all the member states that :

— those services are not always organised so as to be able to meet needs satisfactorily, either because of a lack of co-ordination or of a dissipation of effort, or else because the clinical control of the use of substances of human origin is inadequate or there is a shortage of properly qualified staff ;

— these problems, where they exist, may lead either to a shortage of substances or to the improper use or wastage of precious products of human origin, both of which it is imperative to prevent in the interest of donors as well as of recipients ;

Observing that the creation of a co-ordinated network of blood transfusion centres at national and/or regional level staffed by qualified specialists and located preferably in general or teaching hospitals can help to resolve the problems described ;

Considering too that the recent efforts made by certain member states to train blood transfusion specialists have contributed decisively to the efficient functioning of such a network of blood transfusion centres and hence to the meeting of needs,

Recommends the governments of member states to launch schemes for the training of blood transfusion specialists on the lines of the model appended.

A. Aim of the training

Blood transfusion specialists should be specifically equipped for the following tasks :

i. Programming and organisation of the collection, preparation, storage, distribution and use of blood and blood products in the light of a periodical evaluation of the needs of the sector in their charge ;

ii. Scientific and technical assistance to the transfusion services under them ;

iii. Organisation of a quality control system ;

iv. Promotion of optimal use of blood and blood products by the organisation, *inter alia,* of a proper system for the clinical control of their use ;

v. Participation in research on blood transfusion, immunohaematology and haemotherapy and circulation of the findings to the subordinate services concerned ;

vi. Organisation of courses for future blood transfusion specialists (doctors) :

— basic training,
— in-service training ;

vii. Further training.

B. General remarks

The model training course given below is designed with certain key features in mind, which can be summarised as follows :

1. The model is not intended as a rigid prescription for the training of blood transfusion specialists. It is essential that interpretation should be flexible.

2. This interpretation, however, should not be left to local medical personnel but be the responsibility of a national specialist professional body which would ultimately be responsible for issuing the diploma or specialist accreditation certificate, etc. This body would be advised by a specialist advisory group, the majority of whom would be full-time specialists in blood transfusion.

3. At the heart of the training are specialist qualifying examinations. These would involve written papers on clinical and laboratory aspects of transfusion practice and relevant practical and oral examinations. The trainee specialist would not be permitted to sit the examinations until the national specialist professional body had confirmed that the prescribed period of appropriate training had been completed satisfactorily.

4. Every effort should be made to ensure that no candidate would be permitted to be examined in the institution in which he or she had been trained. Where this is not possible efforts should be made to see that at least one of the examiners is external.

5. The fundamental concept on which the training programme would be based would be in-service training (apprenticeship). The availability of lectures and/or practical courses should be encouraged. However, these may be either obligatory or voluntary.

6. A period of postgraduate (after medical school) general medical training would be obligatory, with particular emphasis on clinical aspects of medical care, prior to the commencement of specialist medical training.

7. All centres in which specialists are trained must be approved, following inspection, by the national specialist professional body. Inspections should be repeated at no more than five-yearly intervals.

8. The national specialist professional body would be responsible for establishing mechanisms whereby trainees can obtain career guidance, if required.

9. Trainees should be encouraged to include a supervised research project, work abroad, etc., as part of their ordinary training. However, they should be recommended to seek advice from the national specialist professional body before embarking on such action, as such activities should normally represent a minor fraction of their total training period.

10. A clear distinction should be made between the specialist training programme of haematologists, clinical chemists, etc., and specialists in blood transfusion.

11. A key element in the training programme is the clinical use of the increasingly wide range of blood and blood-related products available and the associated laboratory facilities required to achieve this end. It is recognised that this will include experience in haematology, microbiology and immunology, including transplant immunology.

12. It would be essential that trainees have experience and knowledge in those aspects of blood transfusion concerned with the collection of blood, donation testing and product production.

13. Appointment to a specialist hospital/transfusion centre post would normally require prior acquisition of the specialist diploma/accreditation certificate.

C. **Model description**

I. *Basic medical experience*

Most countries require that all doctors, after graduation from university, spend a minimum period in hospital practice (junior hospital practice) prior to full qualification. In some countries this period is extended to twenty-four months and includes a period of general practice (primary care).

It is proposed that a minimum period of twelve months' junior hospital practice should be mandatory. It is recognised that in some countries this basic clinical experience is mandatory prior to graduation from university.

II. *Postgraduate medical training of specialists*

It is important that trainees in blood transfusion have a period, which would not normally be less than two years, for broadening their general medical training at a postgraduate level. Normally this would be primarily directed towards clinical work, particularly in internal medicine and/or surgery and/or obstetrics and/or paediatrics and/or intensive care. It would, however, be acceptable to spend one of the two years in a pathology laboratory complex to gain experience in basic pathology, clinical chemistry and microbiology. As an alternative to the year in laboratory medicine, it would be acceptable to spend a year in haematology, provided the experience covered both clinical and laboratory aspects.

III. *Specialist training*

The period of specialist training in blood transfusion would normally last four years. Two years would be obligatory in blood transfusion (see below), one year in haematology (not necessary if included in general postgraduate medical training), and one year in immunology with particular reference to infection, transplantation and immunologically related diseases.

IV. *Summary*

> 12 months	1-2 years	> 4 years
Basic medical experience	Postgraduate medical training	Specialist training: two years' transfusion, one year haematology (clinical and laboratory) one year immunology (clinical and laboratory)
	Examination I	Examination II

V. *Specific aspects of specialist training*

It is recognised that at the present time trainees in blood transfusion may have to obtain the required experience (two years in blood transfusion) outside the transfusion centre because the necessary facilities (services) are not available. It is also recognised that some transfusion centres have the required facilities to provide satisfactory training in those aspects related to the year of immunology. Accordingly, guidance on the required experience is given below :

a. *General blood transfusion practice*

— Recruitment and selection of blood donors including psycho-social and ethical aspects ;

— Blood group serology (all aspects of immunohaematology for red cells, platelets, white cells and plasma proteins) ;

— Genetics ;

— Blood component production ;

— Blood donation testing ;

— Blood component preservation ;

— Blood transfusion legal aspects ;

— Plasma fractionation (basic principles) ;

— Haemotherapy (indications, crossmatching and the use of all cellular and plasma related products)[1] ;

— Apheresis (donor and patient applications) ;

— Reagent production ;

— Haemostasis ;

— Untoward effects of transfusion ;

— Laboratory management ;

— Computer sciences.

b. *Haematological aspects of transfusion*

Whilst a background training in general haematology is required, particular emphasis should be placed on the clinical conditions requiring transfusion support. These would include :

i. haemorrhagic disorders,
ii. haemoglobinopathies,
iii. aplastic anaemia,
iv. bone marrow transplantation,
v. haematological malignancies.

c. *Immunological aspects of transfusion*

Those aspects related to transfusion practice would be regarded as particularly relevant. These would include :

i. complement components,
ii. immunoglobulin estimation and sub-typing,
iii. cellular immune response tests,
iv. chemotactic mechanisms,
v. lymphokines,
vi. clinical management of microbial invasion with particular reference to lymphokines and immunoglobulin preparations,
vii. post-transfusion microbial infections,
viii. histocompatibility and transplant immunology,
ix. other laboratory immunology tests,
x. infectious diseases (laboratory, clinical and epidemiological aspects).

VI. *Examination*

It is assumed that all trainee transfusion specialists will be required to sit an examination to attest their professional competence. It is proposed that specialist examinations should be as follows :

Part 1

This would be a test of the candidate's knowledge of basic sciences : biochemistry, microbiology, haematology and statistics. It would take the form of a multiple-choice, written examination paper, and would normally be sat at the end of the general postgraduate professional training period. Those medical doctors who had full qualifications (diploma) in internal medicine, obstetrics, paediatrics, clinical chemistry, anaesthetics, would be exempt not only from the examination but from one or two years' general post-graduate medical experience.

Part 2

This examination could, for example, include the following :

a. Two three-hour papers covering transfusion, haematology and immunology in the proportion of the course content,

b. Two three-hour practical tests,

c. An oral examination (half an hour).

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1. Some examples of currently relevant blood components : whole blood, red cell concentrates, white cell concentrates, platelet concentrates, transfer factor, interferon, cryoprecipitate, fresh frozen plasma, albumin, factor VIII concentrates, factor IX concentrates, antithrombin III concentrates, fibrinogen concentrate, normal and specific immunoglobulins. Relevant clinical experience, associated with haemotherapy, would include cardiac surgery, neonatal medicine, transplant surgery, management of congenital and acquired bleeding disorders, traumatology and intensive care, infection and immunologically related diseases.