

Overview of Transfusion Medicine in Europe: training and education

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1- Summary

Teaching basic knowledge of transfusion medicine during the education of medical students and teaching in the postgraduate training of all those involved in transfusion practices are the supposition for the improvement of practical transfusion medicine.

So it is of interest to document the existing conditions of training and education within Europe. Consequently EuroNet-TMS-Committee n° 3 designed questionnaires for collecting information from seventeen European countries.

The replies have shown that transfusion medicine teaching and education reported as a definite and clearly defined speciality, with different tones and degrees, is to be considered at different levels relating to the teaching of basic knowledge of transfusion medicine during education in twelve countries, as well as in postgraduate training in five countries. In eight countries transfusion medicine is included as a medical speciality in the medical school.

In sixteen of seventeen countries a medical or biological degree is an assumption for people who are eligible for the responsibility of a hospital blood bank or a blood establishment. A fellowship programme in transfusion medicine is not as yet established in the majority of the countries and requirements for continuing education exist in ten of the seventeen countries.

For nurses, who work in a hospital blood bank or blood establishment, only moderate training and education programmes exist. Official training programmes for transfusion nurse specialists are not offered in any country. Also a certification system is missing in Italy. A continuing

education is introduced on local, non-official programmes without resulting in formal qualification as a rule.

The analysis of the situation in training and education concerning the technologists show similar constitutions like for nurses. One can conclude, that the given data may serve as an incentive or impulse for setting up suitable regulations and a consensus for a transfusion medicine curriculum, although each European country has its peculiarities. The progress in all fields of transfusion science has made the need for qualified essential. Training and education is one of the main objectives of the European Network of Transfusion Medicine Societies (EuroNet-TMS) with two principal aspects.

Firstly, teaching basic knowledge of transfusion medicine during the education of medical students and, secondly, teaching transfusion medicine in postgraduate training. Consequently, the EuroNet-TMS-Committees designed questionnaires to collect information within Europe, to draw maps of the real situation, to analyse discrepancies, and to make proposals for more coherence throughout Europe. The questionnaires by committee n° 3 (Training and Education) aim to document relevant activities in European countries in order to determine potential additional educational needs or else to consolidate similar activities. The questionnaires were sent out to the promoters of EuroNet-TMS as well as to supporting blood establishments and were answered by seventeen countries; namely: Austria (AUT), Belgium (BEL), Denmark (DNK), Finland (FIN), France (FRA), England (ENG), Germany (DEU), Greece (GRC), Ireland (IRE), Italy (ITA), Luxembourg (LUX), the Netherlands (NLD), Norway (NOR), Portugal (PRT), Spain (ESP), Sweden (SWE), Switzerland (CHE). The questionnaire met with a varied response. These variations, no doubt, had much to do with differences in the health care systems

Table I - Is transfusion medicine included in studies?

Teaching of Transfusion Medicine included in the undergraduate curriculum																
AUT	BEL	CHE	DEU	DNK	ESP	FIN	FRA	ENG	GRC	IRE	ITA	LUX	NLD	NOR	PRT	SWE
x	x	x	x	x	-	x	x	x	x	-	-	-	x	x	-	x
Transfusion Medicine included as a medical speciality																
x	-	-	x	-	-	-	x	x	x/-	-	-	-	x	x	x	x

between the different countries. In general, national figures are available in eight countries (Austria, Germany, France, Italy, Luxembourg, the Netherlands, Spain, Switzerland), whereas seven countries (Belgium, Denmark, Finland, Norway, Portugal, Sweden, England) ignored this question and moreover Greece and Ireland gave no comments.

2- Physicians or relevant scientists

In the analysis of the questionnaires concerning the physicians or relevant scientists, big differences are obvious.

2.1- Is teaching of Transfusion Medicine included in the undergraduate curriculum?

In twelve countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, the Netherlands, Norway, Sweden, Switzerland, England) the teaching of transfusion medicine is included in the undergraduate curriculum. There are no subjects devoted to transfusion medicine during the undergraduate period in five countries (Ireland, Italy, Luxembourg, Portugal, Spain) (Table I).

2.2- Is Transfusion Medicine a medical speciality?

In seven countries (Austria, France, Germany, the Netherlands, Norway, Portugal and Sweden) transfusion medicine is recognised as an official medical speciality. In four countries (Ireland, Italy, Luxembourg and Spain) the teaching of transfusion medicine either as part of the undergraduate curriculum or well as a medical speciality included in the medical school is not adopted. In Denmark, Finland, Greece and Switzerland teaching of transfusion medicine is included in the undergraduate curriculum, but not as a medical speciality in the medical school (Table I). The duration of the training time varies from 4 to 6 years. In some countries training in the speciality "Transfusion Medicine" requires additional training time in other relevant specialities: Austria 2 years in internal medicine or surgery; Germany: 2 years alternative in internal medicine, or surgery, or

anaesthesiology, or gynaecology, or laboratory medicine, or paediatrics; France: MD + 2 years; the Netherlands: internal medicine 4 years in addition to 2 years transfusion medicine as well as in Norway: half a year haematology. Otherwise, in Belgium a postgraduate course of 300 hours in one year meets the requirements for the speciality "transfusion medicine".

2.3- Which medical or biological specialities are eligible to assume the responsibility?

Apart from in Finland where no regulations exist, in all countries people with medical or biological degrees are eligible to assume the responsibility of a hospital blood bank or a blood establishment. In Austria, Germany, Norway, Portugal and Sweden specialists for transfusion medicine are required to assume the responsibility. In the other countries specialities like haematology (Greece, Ireland, Italy, Spain and Switzerland), internal medicine or anaesthesiology (Switzerland), or clinical pathology (Ireland, Italy and Greece), or clinical biology or pharmaceuticals (Belgium) are eligible. In France the responsible person must be an MD or doctor in pharmacy with an additional one year speciality and certification; for England a doctor accredited with a certificate of completion of specialist training in haematology/blood transfusion. Before assuming these responsibilities in most of the countries, the person must be trained for between a few months and some years for additional education and variable experiences in blood transfusion as well as health management (the Netherlands) according to the necessary local requirements.

2.4- Is there a fellowship programme in transfusion medicine?

In the majority of the countries a fellowship programme in transfusion medicine is not established. Only for Denmark, France, the Netherlands, Norway, Portugal and Sweden are such programmes are certified (Table II).

2.5- Is board certification required?

Board certification is required in only six countries (Austria, France, Germany, the Netherlands, Norway

Table II - Requirements for physicians or relevant scientists

Fellowship programme in Transfusion Medicine																
AUT	BEL	CHE	DEU	DNK	ESP	FIN	FRA	ENG	GRC	IRE	ITA	LUX	NLD	NOR	PRT	SWE
-	-	-	X	-	-	-	X	-	-	-	-	-	X	X	X	X
Requirements for board certification																
X	-	-	X	-	nc	-	X	-	-	-	-	-	X	X	X	-
Requirements for continuing education																
X	X	X	-	-	X	-	X	X	-	-	X	-	X	-	X	-
Requirements for a CME credit system																
X	X	X	X	-	nc	-	X	X	X	X	X	-	-	-	-	-

nc: no comment

and Portugal) and not in Belgium, Denmark, Finland, Greece, Ireland, Italy, Luxembourg and Sweden, Switzerland and England), whereas no comments are given from Spain (Table II).

2.6- Who organises and administers the Diplomas?

Diplomas are organised and administered in a few countries and by different authorities:

- Austria and Germany: General or Federal Medical Councils;
- France: Universities;
- the Netherlands: Dutch Internist Society;
- Norway: National Health Authority;
- Portugal: College of Transfusion Medicine Doctors and Government;
- Sweden: Swedish Society of Transfusion Medicine;
- no comments were made by Denmark, Finland, Germany, Greece, Ireland, Italy, Luxembourg, Spain and Switzerland.

2.7- Is there a requirement for continuing education?

Requirements for continuing education exist in ten

of the seventeen countries (Austria, Belgium, France, Italy, the Netherlands, Portugal, Switzerland, Spain and England), whereas for Denmark, Finland, Germany, Greece, Ireland, Luxembourg, Norway and Sweden such programmes are not implemented (Table II).

2.8- Is there a requirement for a CME credit system?

In 8 countries CME credit systems exist, those being Austria, Belgium, France, Germany, Greece, Ireland, Italy, Switzerland and England. No such system exists in 9 countries (Denmark, Finland, Luxembourg, the Netherlands, Norway, Portugal and Sweden).

3- Nurses

Generally speaking, there are some training and education programmes concerning nurses who work in hospital blood banks or blood establishments.

3.1- Is there an official programme in phlebotomy or

Table III - Programmes and requirements for nurses

Official programmes for nurses in phlebotomy or transfusion practices																
AUT	BEL	CHE	DEU	DNK	ESP	FIN	FRA	ENG	GRC	IRE	ITA	LUX	NLD	NOR	PRT	SWE
-	-	-	-	-	-	X	-	-	X	X	X	-	-	X	-	-
Training programmes for transfusion nurse specialists																
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Requirements of a certification system																
-	-	-	-	-	nc	-	-	-	-	-	X	-	-	-	-	-
Requirements for continuing education																
-	-	X	-	-	nc	X	X	X	-	X	X	-	-	-	-	-

nc: no comment

Table IV - Categories of personnel involved

Categories of personnel are involved in Phlebotomy																
AUT	BEL	CHE	DEU	DNK	ESP	FIN	FRA	ENG	GRC	IRE	ITA	LUX	NLD	NOR	PRT	SWE
DN	N	N	DN/N	nc	N	N	N	IHS	N/T	nc	N	N	nc	nc	N	N/T
Component preparation																
N	T	T	DN/N	nc	T	N	T	IHS	N/T	CS	T	QT	nc	nc	N/T	T
Laboratory work																
T	T	T	T	nc	T/N	T	T	CS	N/T	CS	T	T	nc	nc	T	T
Testing																
T	T	T	T	nc	T/N	T	T	CS	T	CS	T	T	nc	nc	T	T

DN = Doctor nurse; N = Nurse; IHS = in home trained staff; CS = clinical scientist; QT = qualified by training; T = Technologists; nc = no comment

transfusion practices for nurses who work in hospital blood banks or blood establishments?

Official training programmes for nurses in phlebotomy and/or transfusion practices are only available in few countries (Finland, Greece, Ireland, Italy, Norway, Table III).

3.2- Is there a training programme for transfusion nurse specialists?

No country offers a training programme for transfusion nurse specialists (Table III).

3.3- Who organises the above training programmes? Training is organised by each blood bank on an individual basis.

3.4- Is there a certification system?

Apart from Italy, certification systems are generally lacking (Table III).

3.5- Is there continuing education?

For Finland, France, Ireland, Italy, Switzerland and England continuing education is introduced through local, non-official programmes, no formal qualification is offered (Table III).

4- For Technologists

The analysis of the situation regarding training and education concerning technologists shows similar conditions to those for nurses.

4.1- What categories of personnel are involved in phlebotomy, components, laboratory work and infectious disease testing?

In almost all countries comparable categories of personnel are involved in phlebotomy (nurses/technologists), component preparation (nurses/

technologists), laboratory work (technologists/clinical scientists) and testing (technologists/clinical scientists) (Table IV).

4.2- Is there an official training programme for technologists who take positions in a hospital blood bank or blood establishment?

Training programmes for technologists taking positions in hospital blood banks or blood establishments exist in Austria, Finland, England, Greece, Ireland, Italy and Norway. Ten other countries (Belgium, Denmark, Spain, France, Germany, Luxembourg, the Netherlands, Portugal, Sweden, and Switzerland) replied to the contrary.

4.3- Who organises such a programme?

In so far as such programmes are introduced they are organised in Austria by the Academy for medical analysis technicians, in Finland by FRC BTS and hospitals, in Ireland by the Institute of Biomedical Sciences and by individual Institutes of Technology, in England by the Royal College of Pathologists with the Institute of Biomedical Science with Health Profession Council and in Greece, Italy and Norway by each blood establishment at local levels.

4.4- Is there formal certification e.g. "Specialist in Blood Banking Technology"?

A formal certification e.g. "Specialists in Blood Banking Technology" does not exist in any country (Denmark made no comment).

5- Closing remarks

At first sight, the answers to the questionnaires might already establish a basis for recognition.

Training and education in transfusion medicine is regarded a clearly defined speciality with different tones and degrees, on the one hand demarcated from clinical and laboratory medicine, on the other hand connected with both.

The teaching of transfusion medicine is to be considered at different levels^{1,2}. The certification of specialists' diplomas differs widely from free self-regulation to centralisation with the involvement of different notified bodies.

With regards to the training and education of

nurses and technologists in the special field of transfusion medicine there are many deficiencies. The situation in different countries cannot be compared like with like, each European country has its peculiarities³⁻⁵.

Therefore, at the moment, the given results of the report may serve as an incentive or impulse for the setting up of suitable regulations governing training and education in transfusion medicine for a common consensus and basis⁶.

References

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