



Training in Cardiology: The European Perspective

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The objective of the EU

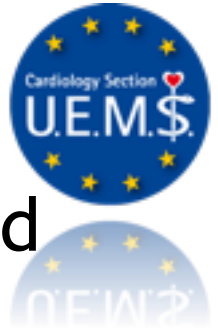
European Unification

- Facilitate and improve the mobility of all workers throughout Europe
- In order to achieve this in different professions
 - EU-Directive 2005/36

Duration of training
(4 years)

↓
Automatic recognition
Title

The problems the EU Directive creates in Medicine



- Different countries have differently organized health systems
 - The training requirements depend upon the needs of each one health system
- Each member state through national laws defines the training requirements
- Obviously needed

Harmonization of the training requirements with respect of the needs of each national state

How much harmonized is Cardiology across Europe?



More harmonized than we think through:

- Uniform continuing medical education
- Common accepted Guidelines

What we are missing

- Formalize the different elements of training
- Set certain standards for these elements

The role of UEMS-CS

How real harmonization will be achieved at the European level



- Respect to the National laws and the national definitions of the content of postgraduate training
- Guidance in order to ensure high quality of training across Europe
- Definition of the training requirements in Cardiology

Training Requirements in Medicine (Cardiology)



- How the problem is approached
 - Define the aim of training
 - Define the training
 - Content of training
 - Assessment and evaluation of training
 - Certification
 - Continuing medical education
 - Recertification
 - The three elements of the training process
 - Trainee
 - Trainer
 - Training institution

Aim of training in Cardiology



- Competent specialist Cardiologist
 - Sub-specialization of a physician, who predominantly cares for patients with cardiovascular disorders.
 - Cardiology and Cardiovascular Medicine can be used interchangeably
- Care of patients with cardiovascular disorders
 - Wide range of emergency and elective clinical activities
 - Knowledge of underlying disease processes
 - Epidemiology and Prevention
 - Diagnostic and therapeutic modalities

Definition of training



- Content of training
 - Ethics of the medical profession
 - Oath of Hippocrates
 - Relevant competency in General Medicine (common trunk)
 - Duration : 2 years
 - Cardiology
 - Aspects of training
 - All aspects of Cardiovascular Medicine: ESC Core Curriculum for the General Cardiologist
 - Certain number and level of competence for each relevant procedures
 - Duration: 4 years

Level of expertise (competence)

– Level of competence

- Level 1: experience of selecting the procedure,
experience of interpreting the results,
inexperience of performing the
procedure
- Level 2: able to perform the procedure with limited
supervision in routine uncomplicated cases
- Level 3: independently perform the procedure,
interpret the results and manage
any complications

UEMS Cardiology Section 2012/ European Curriculum for the Specialty of Cardiology



Procedure/ technique	Numbers	Level of competence
ECG	500	III
Ambulatory ECG	100	III
Exercise test	150	III
Ambulatory BP	50	III
Echo-Doppler Studies	350	III
TEE	50	II
Stress Echo	50	I
Nuclear Studies	50	II
Cardiac CT	50	II
CMR	50	II
Coronary and/ or LV Angiography	300	III
Percutaneous Interventions	50	II
Temp. PM Impl.	10	III
PM/ ICD programming	50	III
PM implantation	20	II
ICD implantation	10	I
CRT implantation/ programming	10/20	I
E-Phys. Studies	25	II
Arrhythmia Ablation	10	I
Right Heart and PA cath.	20	III
Electr. Cardioversion	10	III
Pericardiocentesis	5	III
ILR	5	II

Definition of training

- Assessment and evaluation of training
 - Training process as a whole
 - Trainee as an individual
 - Knowledge based assessment (KBA): MCQs
 - Formative assessment
 - Summative assessment
 - Euro KBA: 120 MCQs in 3 hours after minimum 3 years of training (Joint efforts of individual NS)
 - Assessment of skills
 - Assessment of professionalism

Definition of training



- Assessment of knowledge

Formative Testing

- mcqs: covering the whole curriculum
- access whenever
- prerequisite for exam/ diploma

Summative Testing

- 120 mcqs = 3 h
- Sit exam
- secure pool of mcqs

- Assessment of skills

- Log book
- Direct observation of Procedural Skills (DOPS)
 - For procedure level III

Training requirements for training institutions



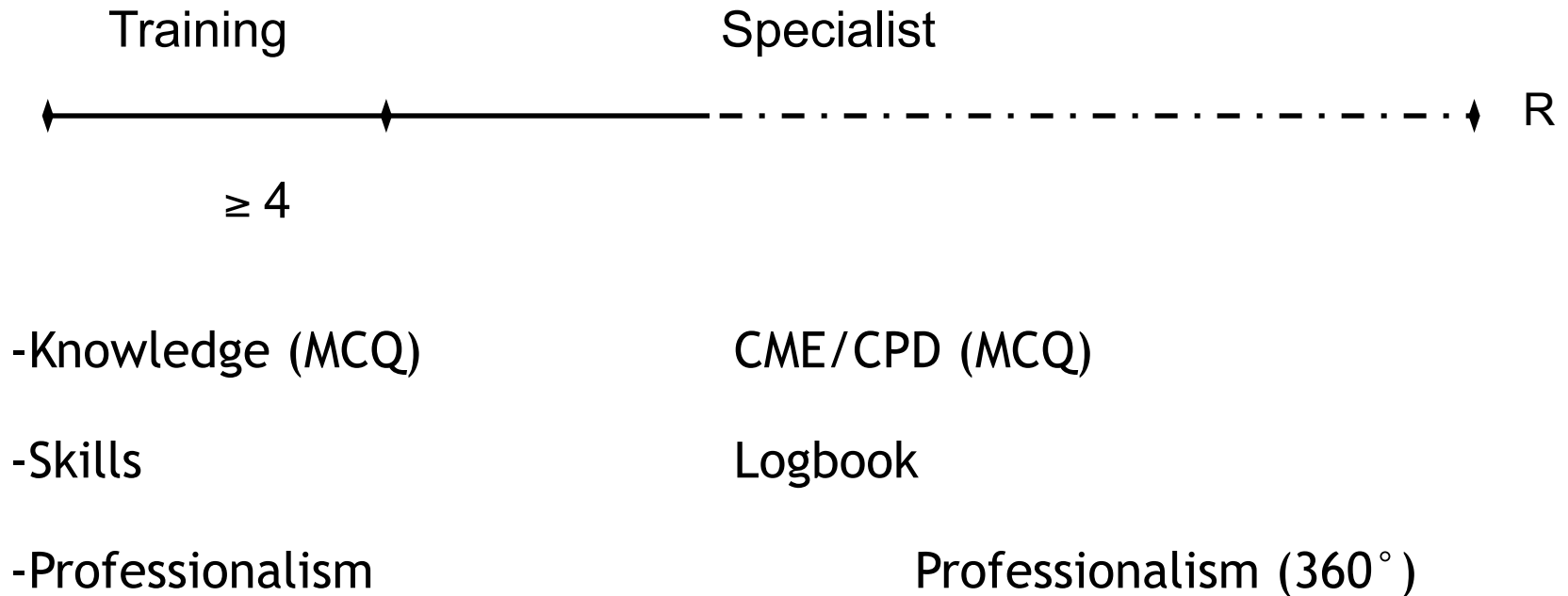
- General requirements
 - One or group of institutions
 - Offers practice across the full range of specialty , including involvement with allied specialties
 - Structured training program, adequate teaching staff , chief of training
 - Internal system of medical audit (mortality conferences, reporting accidents etc)
- Quality assessment of the institution
 - Structured monitoring by National authorities at least every five years
- Number of trainees per institution
 - Number of trainees that an institution can train (numbers of procedures been performed in the institution / numbers of procedures needed per trainee)
 - Number of specialists needed according to the manpower planning

Training requirements for trainers



- **General requirements**
 - Chief of training
 - Additional trainers
 - Ratio trainers/trainees: adequate to allow close supervision
- **Supervision**
 - All elements of work should be supervised - Outpatients and referrals should be discussed
 - Increasing autonomy
 - Educational supervisor (educational progress of a specified trainee)
 - Clinical supervisor (clinical work of a specified trainee)
- **Appraisal with supervisors and training director**
 - Regular appraisal every 3 months
 - Report of progress after appraisal
 - Appraisal by the director of training in the end of the training period
 - Final OK by the director

European Diploma General Cardiology (a long life process)





The management platform for the
EUROPEAN DIPLOMA GENERAL CARDIOLOGY



Thank you for your attention