

Where does European Medical Education tend to in the future?

A global perspective

Wohin entwickelt sich die Europäische Medizinische Ausbildung?

Eine Übersicht mit globaler Perspektive

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Zusammenfassung:

Die Medizinische Ausbildung zeigt Entwicklungen, die auch in anderen Feldern der universitären Ausbildung vorherrschen. Im Rahmen der Internationalisierung und Globalisierung in Verbindung mit Innovationen der Informations- und Kommunikationstechnologien sowie der ausgeprägten Migration von Ärzten wurden Folgen wie Kommerzialisierung und Privatisierung beobachtet. Dies wiederum hat eine Qualitätssicherungsbewegung hervorgebracht, die eine Standardisierung und Akkreditierung in den Mittelpunkt stellte.

Bologna-Deklaration und -Prozess können als Teil dieser neuen Besorgnis um Ausbildungsqualität gesehen werden; gleichzeitig entstehen durch sie aber Probleme für die medizinische Ausbildung, insbesondere durch die zwei Ausbildungssequenzen (Bachelor- und Masters-Diplome).

Die Entwicklung von Standards in der medizinischen Ausbildung Europas begann mit der EU Richtlinie Medizin, die sich im Kern seit 30 Jahren nicht geändert hat. Die wachsende Internationalisierung der medizinischen Ausbildung, die eine Reihe von innovativen Ansätzen hat, die aber auch viele Probleme und Herausforderungen bietet, unterstreicht die Bedeutung des WFME-Programms für Globale Standards, das im Jahr 1997 begonnen wurde. Die Trilogie der Globalen Standards deckt das Kontinuum der medizinischen Ausbildung ab und wurde überall in der Welt übernommen. Die Standards für die grundständige Medizinische Ausbildung werden in Reformprogrammen vieler Medizinischer Fakultäten verwendet und bei der Definition nationaler Akkreditierungsstandards eingesetzt.

Diese Entwicklung wurde kürzlich noch verstärkt durch die Strategische Partnerschaft der WHO/WFME zur Verbesserung der Medizinischen Ausbildung. Ein praktisches Ergebnis war die Entwicklung von WHO/WFME-Leitlinien für die Akkreditierung der Medizinischen Ausbildung. Eine Arbeitsgruppe in dem neuen EU Thematischen Netzwerk MEDINE wurde nun mit der Definition europäischer Akkreditierungsstandards beauftragt und nutzt dabei die Globalen Standards der WFME als Schablone. Die unmittelbare Folge wird die Entstehung nationaler Akkreditierungssysteme in der europäischen Region sein, so dass es zum jetzigen Zeitpunkt wohl keinen Bedarf für ein zentrales Akkreditierungssystem der EU gibt.

Schlüsselwörter: Internationalisierung, Globalisierung, Migration von Ärzten, Kommerzialisierung der medizinischen Ausbildung, Bestimmung von Standards, Akkreditation

Abstract:

Medical education is presently unveiling trends, which also dominate other fields of higher education. Within the framework of internationalisation and globalisation, and driven by developments in information and communication technology and the pronounced migration of medical doctors, one has observed consequences such as commercialisation and privatisation. This, in turn, has engendered a quality assurance reaction with focus on standardisation and accreditation.

The Bologna Declaration and Process can be seen as part of this new quality concern, but also raises problems for medical education regarding the two-cycle (bachelor and master degrees) system.

Standard setting in medical education in Europe took its start with the EU Medical Directive, which has essentially not been changed in 30 years. The increasing internationalisation of medical education, which shows a number of innovative trends, but which also unveils many problems and challenges, emphasises the role of the WFME Global Standards Programme launched in 1997. The Trilogy of Global Standards, covering the continuum of medical education, has been adopted in all parts of the world. The Standards for Basic Medical Education are used in reform programmes in many medical schools and are now also being incorporated in definition of national accreditation standards.

This development has recently been strengthened in the WHO/WFME Strategic Partnership to Improve Medical Education. One practical result of this collaboration was the development of WHO/WFME Guidelines for Accreditation of Basic Medical Education.

A Task Force under the new EU Thematic Network MEDINE is now working with definition of European accreditation standards using the WFME Global Standards as a template. The immediate perspective will be establishment of national accreditation systems in the European region and there is probably no need at the moment for a common accreditation system in Europe.

Keywords: internationalisation, globalisation, migration of medical doctors, commercialisation of education, standard setting, accreditation

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Introduction

The organisers have asked me to look into the future of medical education. I will do it by projecting trends, which can be seen at the moment; it is not the intention to be very prophetic as experiences inspire to scepticism regarding validity of prognoses for medical education.

Present Status

• Global trends in higher education

Medical Education is under influence of a number of trends, which also dominate other types of higher education (table 1).

Table 1

10 Actual Trends in Higher Education
• Internationalisation • Globalisation • ICT industrialisation • Virtualisation • Commercialisation • Privatisation • Harmonisation • Standardisation • Quality Assurance • Accreditation

Globalisation of medical education is becoming of increasing importance as part of international developments in medicine and the mobility of the medical profession.

The increasing internationalisation of the medical profession raises the question of safeguarding the practise of medicine and the use of the medical workforce. Standards in medical education, quality assurance and accreditation are probably the most important keywords in the actual debate of medical education policy.

Similar activities can be seen in higher education in general with initiatives coming from e.g. UNESCO and OECD.

Table 2 shows a number of European initiatives regarding harmonisation and quality assurance, including initiatives from the European Commission in form of the Medical Directive and the endeavours by the Advisory Committee on Medical Training (ACMT) to formulate principles for medical education. The Bologna process and the activities of the European Association for Quality Assurance in Higher Education (ENQA) should also be mentioned.

Table 2

Major European Quality Assurance Initiatives
• European Commission "Directive 2005/36/EC on the Recognition of Professional Qualifications" • Advisory Committee on Medical Training (ACMT) "Report and Recommendations on Undergraduate Medical Education" • The Bologna Process "European Dimension in Quality Assurance" • European Association for Quality Assurance in Higher Education (ENQA) "Accreditation models in Higher Education" "Standards and Guidelines for Quality Assurance in the European Higher Education Area"

• The Bologna process and medical education

The ten themes of the Bologna Process (table 3), which is now spreading its influence beyond Europe, are already to some extent being incorporated in present university activities, e.g. supplement of diplomas, the ECTS system and the free movement. Promotion of European co-operation and consideration of the European dimension as well as life-long learning are principles, which should not be of any problem to medical education. Some of the issues will be covered by the MEDINE project (see later).

Table 3

Themes of Bologna Process
• Adoption of a system of easily readable and comparable degrees • Establishment of a system of credits such as in the European Credit Transfer System (the ECTS system) • Promotion of mobility by overcoming obstacles to the effective exercise of free movement • Promotion of European co-operation in quality assurance • Promotion of the European dimension in higher education • Lifelong education • Involvement of institutions and students • Promotion of the attractiveness of the European Higher Education Area • Promotion of closer links between the European Higher Education Area and the European Research Area • Two-cycle system (bachelor and master)

In discussing the consequences of the Bologna Process for medical education, it should be emphasised, that the Bologna Declaration was only signed by ministers of education; it is not a law or an international convention. It should also be remembered that so far there has been no dialogue with ministries of health, medical faculties, the medical profession or medical students. Until now, there has been rather limited interest in the Bologna issue among medical educators.

In February 2005, the World Federation for Medical Education (WFME) and the Association for Medical Education in Europe (AMEE), in co-operation with the Association of Medical Schools in Europe (AMSE) and the World Health Organization (WHO) Office for the European Region, published a statement on the Bologna Process and medical education.

Especially, the statement deals with the two-cycle (bachelor + master) question, which raises problems for medical education. The statement underlines (table 4), that the Bologna Process must not invalidate attempts to integrate the medical curriculum. Otherwise, the Bologna Process is considered a most valuable contribution to quality improvement of medical education.

Table 4

WFME/AMEE Statement on the Bologna Process and Medical Education
• It should be possible to maintain the long, integrated one-tier programme if preferred • If medical education is based on two cycles, the undergraduate degree after 3 years (180 ECTS credits) should not be planned for immediate access to employment

East Europe. In any case, Europe outside the European Union will need separate treatment.

The need for standards in the European scene is determined by certain challenges for medical education (table 13-14), the rapid increase in new medical schools and implications of internationalisation, as expressed by a growing number of exchange programmes for students and teachers and the migration of doctors.

Table 13

Qualitative challenges in medical education

- political, socio-economic and cultural realities
- institutional conservatism
- faculty staff inertia
- lack of educational budgets
- insufficient supervision of programmes
- lack of incentives
- insufficient leadership

Table 14

Quantitative challenges in medical education

- explosion in number of medical schools
- inadequate medical manpower planning in some countries
- inadequate capacity building
- external and internal brain drain
- brain export

One paramount problem worldwide is the rapid increase in the number of new medical schools, which have serious consequences for the quality. Over the last ten years, we have seen an increase of medical schools of about 100 per year. Many have been established on foundations of insufficient resources, many are lacking sufficient clinical settings and many do not have a research attainment. A new trend has been the rise of commercialised medical schools in the form of "for profit" medical schools, the main goal of which is the easy and convenient production of graduates. Such schools particularly attract students who are academically unqualified to enter well-established schools, but who are affluent.

Some European countries have insufficient medical manpower planning, being dependent on university study places in other countries or active recruitment of doctors from abroad. However, external and internal brain drain is presently not a big problem for Europe, but is influencing the health manpower situation in other parts of the world. In Africa, it has developed into a catastrophic situation. Also brain export is now a reality, some countries deliberately producing medical doctors for export in return for other commodities. Such doctors are not always allowed to work in their own country, which probably tells something about the quality.

• Internationalisation of medical education

The increasing internationalisation of medical education offers a number of advantages (table 15), but on the other hand we should also be aware of disadvantages, reservations and challenges (table 16).

Table 15

Internationalisation of medical education - advantages

- Transfer of knowledge, skills, experiences and expertise
- Increase in intercultural understanding
- Increase in language skills
- Consolidation of institutional economy
- Individual personal, societal, career and economic gains
- Cost-effectiveness
- International manpower "buffer" function
- Brain gain

Table 16

Internationalisation of medical education - disadvantages/reservations/challenges

- Cultural diversities with consequences for curriculum planning
- Complex national capacity planning
- Risk of brain drain
- Qualitative aspects of brain export
- Reduced institutional/national freedom
- Needs for investment

Prerequisites for the internationalisation process are important (table 17).

Table 17

Internationalisation of medical education - prerequisites

- Instruments in safeguarding adequate national manpower provision
- Adequate methods of regulating manpower traffic
- Instruments in safeguarding quality of educational product (standards with preservation of diversity)

Trends

• Trends in medical education

In the first decade of the twenty-first century, a number of innovative trends in medical education can be found around the world (table 18).

Table 18

Innovative trends in medical education

- student-activating instructional methods (PBL; case-based; task-based learning)
- integration of basic sciences and clinical disciplines in teaching and assessment
- emphasis on clinical and communication skills
- broadening of clinical training settings (community-based teaching; skills laboratories)
- increasing validity and reliability of assessment systems (standardised patients; OSCEs)

The classical two-phase division of the medical curriculum in basic sciences and clinical sciences is now increasingly being substituted by a number of new curricular models, defined by either organisation of the content, the teaching and learning methods, the approach of teaching and learning or from the point of view of learning objectives or social responsibility of the institution (table 19-20).

Table 19

New curricular models in medical education I*Defined by organisation of content*

- integrated, organ-based curriculum
- integrated, clinical presentations/task-based curriculum
- age-based developmental curriculum

Defined by teaching/learning methods

- problem-based curriculum
- case-based curriculum

Table 20

New curricular models in medical education II
<i>Defined by teaching/learning approach</i>
• “core and option” model
<i>Defined by learning objectives</i>
• competency/outcome-based curriculum
<i>Defined by social responsibility</i>
• community-oriented curriculum

Also in the management of medical education developments are appearing in many regions (table 21).

Table 21

Developments in management of medical education
• higher social responsibility of educational institutions • awareness of health care needs of societies • higher influence of curriculum committees (de-departmentalisation) • increasing student influence on programme development • clearer educational budgetary responsibility • strengthening of educational leadership

Topics, which might become of interest in medical education in the future are listed in table 22.

Table 22

Futurity of medical education?
• adaptive curricular planning (tailored to the individual student) • virtual university approach • multi-professional concept of training • integration of basic and postgraduate medical education (early specialisation)

With the process of "best evidence medical education" an initiative has been taken to introduce a scientific approach to medical education in order to stimulate research in medical education and narrow the gap between "opinion-based" and "evidence-based" teaching and learning.

• WFME global standards programme

The WFME launched an ambitious programme on International Standards in Medical Education in 1997. The programme was presented in a position paper published in the journal Medical Education in 2000.

The working process used consisted of three international task forces with experts from all five continents. Members of the Task Forces were selected on the basis of their expertise with geographical coverage an important consideration.

The process led to the development of the Trilogy covering WFME Global Standards for Quality Improvement in (a) Basic Medical Education, (b) Postgraduate Medical Education and (c) Continuing Professional Development (CPD) of Medical Doctors (table 23). The Trilogy was the essential background material for the WFME World Conference in Medical Education entitled: Global Standards in Medical Education for Better Health Care, which took place in Copenhagen March 2003. The conference resulted in consensus

worldwide on the standards programme and gave WFME a renewed mandate.

Table 23

The WFME trilogy of global standards
WFME Global Standards for Quality Improvement
• Basic Medical Education • Postgraduate Medical Education • Continuing Professional Development (CPD) of Medical Doctors
WFME Office: University of Copenhagen, Denmark, 2003.

The aims and specific objectives of the WFME project on global standards emerge in table 24 and 25.

Table 24

Aims of WFME Standard Programme
• Medical Education Quality Improvement Tool • Instrument in Safeguarding Internationalisation of Medical Doctors

Table 25

Objectives
• Stimulate authorities, organisations and medical education institutions to plan for reforms and quality improvement. • Establish national / international evaluation and recognition of medical educational institutions and programmes. • Safeguard practice in medicine under conditions of increasing internationalisation.

In the early stages of developing of the Trilogy, it became clear that specifying global standards in any restricted sense would exert insufficient impact, and indeed would have the potential to lower the quality of medical education. Thus, a lever for change and reform had essentially to be incorporated. This led to the concept of the WFME standards to be framed to specify attainment at two different levels: (a) basic standards or minimum requirements; and (b) standards for quality development.

All three documents operate with nine closely related areas (table 26) and standards are defined at the two levels for about 35 sub-areas in each of the documents.

Table 26

WFME trilogy of standards: Areas		
Basic Medical Education	Postgraduate Medical Education	Continuing Professional Development (CPD)
1. Mission and Objectives	1. Mission and Outcomes	1. Mission and Outcomes
2. Educational Programme	2. Training Process	2. Learning Methods
3. Assessment of Students	3. Assessment of Trainees	3. Planning and Documentation
4. Students	4. Trainees	4. The Individual Doctor
5. Academic Staff/Faculty	5. Staffing	5. CPD-Providers
6. Educational Resources	6. Training Settings and Educational Resources	6. Educational Context and Resources
7. Programme Evaluation	7. Evaluation of Training Process	7. Evaluation of Methods and Competencies
8. Governance and Administration	8. Governance and Administration	8. Organisation
9. Continuous Renewal	9. Continuous Renewal	9. Continuous Renewal

The definitions used for the two levels are shown in table 27 and 28, and table 29 gives a concrete example from the document in basic medical education.

Table 27

WFME Global Standards in Medical Education: Definitions
Basic Standards This means that the standard must be met by every medical school/educational institutions from the outset and fulfilment demonstrated during evaluation. Basic standards are expressed by a "must".

Table 28

WFME Global Standards in Medical Education: Definitions
Standards for quality development. This means that the standard is in accordance with international consensus about best practice for medical schools/educational institutions and education programmes. Fulfilment of or initiatives to fulfil some or all of such standards should be demonstrated. Standards for quality development are expressed by a "should".

Table 29

WFME global standards in basic medical education
1 MISSION AND OBJECTIVES
1.1 STATEMENTS OF MISSION AND OBJECTIVES
Basic standard: The medical school must define its mission and objectives and make them known to its constituency. The mission statements and objectives must describe the educational process resulting in a medical doctor competent at a basic level, with an appropriate foundation for further training in any branch of medicine and in keeping with the roles of doctors in the health care system. Quality development: The mission and objectives should encompass social responsibility, research attainment, community involvement, and address readiness for postgraduate medical training.

Global standards can be used as a tool for quality assurance and development in different ways. The primary intention of WFME was to provide a new framework against which medical schools/educational institutions (in CPD: Individual Doctors and the Medical Profession) can measure themselves in voluntary institutional self-evaluation and self-improvement processes.

The process described can be further developed by inclusion of evaluation and counselling from external peer review committees. WFME considers a combination of self-evaluation and peer review to be the most valuable method.

Finally, depending on local needs and traditions, the global standards can also be used by national or regional agencies dealing with recognition and accreditation of medical schools/educational institutions and programmes (table 30).

Table 30

Use of standards
- framework for institutional (voluntary) self-evaluation - external evaluation and counselling from peer review committees, including site visits - combination of these procedures - recognition and accreditation of institutions/programmes

At the World Conference 2003, the WFME was encouraged to proceed further with its programme on Global Standards. The implementation process is presented in table 31.

Table 31

Implementation of the WFME programme
- information - translations of standards - validation of standards in pilot studies - institutional self-evaluation and peer review - WFME advisor function - incorporation in national standards and accreditation procedures - guidelines for accrediting agencies - world register of accredited educational institutions

The WFME standards in basic medical education have been validated in 36 medical schools in 24 countries. The conclusions from this process show that the standards are realistic and adequately divided between basic and quality development levels, that there is a need for local specification and supplements in some institutions, and that the use of the standards in institutional self-evaluation is a positive event with lasting constructive consequences.

Pilot studies on the two other sets of standards are now also being conducted in institutions/organisations.

There are increasing experiences of using the WFME standards in institutional self-evaluation and peer reviews.

According to the information so far, the WFME standards in basic medical education are influencing medical education in a number of countries and the WFME standards have been used as a template for national and regional standards as well as being incorporated in national accreditation procedures. This development includes not only major existing accreditation systems, like LCME in North America, GMC in the United Kingdom and AMC in Australia, but also new systems (Switzerland, Ireland, Central Asian Republics, Malaysia, China, Egypt, Sudan, the Gulf-region, Bangladesh, etc.).

Returning to the question of how European standards can be developed, table 32 illustrates ways for adapting the global standards to the European scene.

Table 32

Adaptation of global standards to Europe
- change of division line between basic standards and quality development standards - European specifications - modification of annotations (used in the standards to clarify, amplify and exemplify)

• WHO/WFME strategic partnership

The interface between medical education and health care delivery systems is of high interest. In 2004, WHO and WFME decided to establish a joint policy on promotion of health systems performance through improvement of health professions education.

Recently, a new WHO-WFME strategic partnership was established to pursue a long-term work plan designed to have a decisive impact on medical education in particular and ultimately on health professions education in general.

The first practical result of the partnership was to set up an international Task Force on accreditation. The Task Force met in Copenhagen in October 2004, and formulated a common policy on accreditation (table 33).

Table 33

Towards WHO/WFME policy on accreditation

In general, WHO/WFME will not be accrediting bodies, but should:

- promote and review Regional/National standards
- promote institutional self-evaluation
- define accreditation guidelines
- promote and support accreditation systems
- develop the WHO Directory of Medical Schools

• WHO/WFME guidelines and accreditation of medical education in Europe

In May 2005, the WHO/WFME guidelines for accreditation were published. Conclusions from the guidelines are shown in table 34. The guidelines can be found on <http://www.wfme.org>.

Table 34

Conclusions from the WHO/WFME guidelines

- need for independence of accreditation agencies from the educational providers
- need for flexible frameworks
- need for non-bureaucratic systems without exorbitant resource demands
- need for pre-defined, medical education – specific, national/regional standards
- need for a procedure based on institutional self-evaluation and external review
- need for transparency of accreditation systems

There are groups working for an European accreditation system trying to transfer the LCME system in North America to Europe without recognising the traditional differences in medical education and in the attitudes to recognition or accreditation within Europe. At the moment it is not realistic to work for such a common accreditation system for reasons mentioned in table 35.

Table 35

Need for accreditation of medical education in Europe?

- probably no need for a common system
- place for different sub-regional and national solutions
- acknowledgement of present differences in recognition/accreditation
- sub-regional solutions are necessary for countries with only one or a few medical schools

However, we should consider to have sub-regional solutions to assist countries with one or a few medical schools.

A new WFME project related to accreditation offers a package for assistance in establishing accreditation, comprising national specifications of standards, assistance in institutional self-evaluation, external review, site visits and recommendations regarding procedure information can be found on <http://www.wfme.org>.

Conclusions

Concluding remarks are presented in table 36-37.

Table 36

Conclusions I the global scene

- MAJOR CHALLENGES IN MEDICAL EDUCATION
- ENDORSEMENT OF THE WFME STANDARD PROGRAMME
- WFME GLOBAL STANDARDS AS TEMPLATE FOR REGIONAL/NATIONAL STANDARDS
- NEED FOR GUIDANCE OF EDUCATIONAL INSTITUTIONS BY WFME ADVISORS
- IMPACT OF THE WHO/WFME STRATEGIC PARTNERSHIP
- WHO/WFME GUIDELINES ON ACCREDITATION SYSTEMS
- NEED FOR WORLD REGISTER OF ACCREDITED MEDICAL SCHOOLS

Table 37

Conclusions II the European scene

- PROBLEMS REGARDING MEDICAL EDUCATION IN THE BOLOGNA PROCESS
- NEED FOR EUROPEAN STANDARDS
- NEED FOR ACCREDITATION SYSTEMS
- PROBABLY NO NEED FOR A COMMON EUROPEAN ACCREDITATION SYSTEM

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