

THE WORLD FEDERATION FOR MEDICAL EDUCATION

History of the First Forty Years, 1972 -2012

by

Hans Karle¹, Henry Walton² and Stefan Lindgren³

Correspondence: Dr Hans Karle, Office of the World Federation for Medical Education (WFME), Faculty of Health Sciences, Panum Institute, University of Copenhagen, Blegdamsvej 3b, DK-2200 Copenhagen N, Denmark. Tel: 00 45 3532 7103; Fax: 00 45 3532 7070; E-mail: wfme@wfme.org

-

MD, DMSc, Dhc, FRCP, Specialist Diploma in Internal Medicine and Haematology, University of Copenhagen, WFME President 1996 - 2008

² MD, PhD, FRCP, FRCPsych, DPM (Lond.), University of Edinburgh, WFME President 1983 – 1996. Henry Walton died 13 July 2012

³ MD, PhD, FACP, FRCP, Specialist Diploma in Internal Medicine and Gastroenterology, Lund University, WFME President 2008 –

CONTENTS

The Founding of WFME	4
Conception of the Federation	4
Planning Group	4
Fourth World Conference in Medical Education	4
Members and Relationships	5
Constitution, Organisation and Functions	6
Regional Structure and Other Relations	6
Presidency	7
The Central Office of WFME	7
Functions of the World Federation	7
Information Services	8
Finances	8
The Bethesda Period, 1972-1983	9
The Physician and Population Change Programme	9
Medical Education and Health Care. Medical Schools Objectives	9
Network of Community-Oriented Medical Schools	10
The Edinburgh Period, 1983-1996	11
The Reorientation Reform Programme for Medical Education	11
The Edinburgh Declaration	11
Resolutions of the Health Parliament of the World	13
The 1993 World Summit on Medical Education	14
Clinical Competence, CME and Medical Manpower	16
Cooperation of WFME with WHO and other Partners	16
The First Copenhagen Period, 1996-2008	17
The CLUCIME Collaboration	17
The WFME Global Standards Programme	17
The Copenhagen World Conference 2003	19
Implementation of the Global Standards Programme	19
Partnership with WHO	21
Promotion of Accreditation	21
The Avicenna Directory of Medical Schools	22
Higher Education Across Borders	22
Debate on the Bologna Process	23
Relations with the WFME Regional Associations	23

The Second Copenhagen Period, 2008- Progress with Projects PhD Standards	24 24
	Participation in Social Accountability Project
Accreditation of Institutions and Programmes	25
The Global Role of the Doctor	25
Preparation of a New World Conference	26
Priorities of WFME	27
References	28

THE FOUNDING OF WFME

Medical education, an integral component of Medicine since Ancient Greece, became a distinct discipline in the 18th century with the Enlightenment. A university activity since the mid-19th century, the quality of academic medicine and of training of doctors gained renewed impetus with Abraham Flexner's *Report*¹ of 1910 which swayed, indeed directed, medical education worldwide, promoting wide interchange of academic principles, with international aspects of medical education accorded increasing importance. Violations of standards of education were identified and countered, such as the recent proliferation of non-academic, proprietary medical schools on a for-profit basis in some countries.

World Conferences on medical education, organised by the World Medical Association, were convened in 1953 in London, the second in 1959 in Chicago, and the third in 1966 in New Delhi

Conception of the Federation

The impetus to establish an international forum for medical educators culminated in a meeting at the New Delhi Conference in 1966. Convened by Amador Neghme, President of the Pan-American Federation of Associations of Medical Schools (PAFAMS), twenty distinguished medical educators from all parts of the world took the decision that a World Federation for Medical Education be founded.

When established, the Federation was to be autonomous, constituting a forum for the medical education constituency worldwide, and assuming responsibility for convening global and other meetings. The Pan-American Federation, as the most established Regional Association undertook to convene the next World Conference, inviting the World Medical Association, the World Health Organization, and its WHO Regional Office, the Pan-American Health Organization (PAHO), and other global agencies concerned with health, as co-sponsors.

Planning Group

A WFME Planning Group met at Mainz, Germany in April 1972. The Planning Group members were Jose Felix Patino, Kurt L Goldstruecker, G.L. Monekosso, V. Ramalingaswamy, A.M. El Hassan, Jose Cuyegkeng, O.K.Harlem, Henry van Zile Hide and Stephan Rössner (representing Henry Walton, President of the Association for Medical Education in Europe (AMEE)), with Lucille Bloch as administrator. The funding grant was from the Josiah Macy, Jr. Foundation. The Planning Group drew up the Constitution, and planned a Founding Conference to be held later that year.

Fourth World Conference in Medical Education

At Copenhagen, Denmark in 1972 the *World Federation for Medical Education (WFME)* was formally brought into being, its Constitution signed on 30 September 1972 by

representatives of the Regional Associations of the Federation, by the representative of the Director-General of the World Health Organization, and the President of the World Medical Association as chief witnesses. Other distinguished witnesses, widely representative of world medical education, also signed, and the WFME Constitution was formally deposited with the World Health Organization in Geneva, WFME thereby recognized as the global body representing medical education worldwide.

Members and Relationships

From the onset, the Federation comprised the existing Regional Associations of Medical Schools: the Pan-American Federation of Associations of Medical Schools (PAFAMS), the Association of Medical Schools in Africa (AMSA), the Association for Medical Education in Europe (AMEE), and the Association of Medical Schools in the Middle East (AMSME). These were the full members. Associate membership status was accorded to existing National Associations for Medical Education where regional associations had yet to be formed: the Association of Philippine Medical Colleges, the Japan Society for Medical Education, the Association of Medical Schools in Israel, the Australian Association for Medical Education, and the Indian Association for the Advancement of Medical Education. Subsequently, the Association of Medical Schools in Israel joined the European Association (AMEE), and the Australian and New Zealand associations combined.

WFME was admitted into official relations with the World Health Organization on 30 January 1974, as a Non-Governmental Organisation (NGO), thereby recognising the Federation as the agency representing medical education and medical schools on the world level. Tamas Fülöp, Director of the Division of Health Manpower Development of WHO, implemented the close relationship between WHO and WFME. The Federation was also listed by the Economic and Social Council of the United Nations as a related NGO, with similar relations to other UN bodies concerned with health, notably UNESCO, UNICEF and the UNDP. The relationship between WFME and the World Medical Association (WMA) was ratified at the first Assembly of WFME at Stockholm 1974, with WMA an ex-officio member of the WFME Executive Council and WFME of the WMA Council.

CONSTITUTION, ORGANISATION AND FUNCTIONS

The Constitution (revised later in 1988 and 1994), affirmed WFME as the global organisation concerned with the education and training of doctors. Its mission is to strive for better health care, by high scientific, ethical and social standards in the education of medical and related personnel, toward provision of competent medical and health services globally.

All three stages of medical education are subsumed: basic (undergraduate) medical education; postgraduate medical education, including vocational and specialist training; and continuing medical education (CME)/continuing professional development (CPD) of medical doctors.

Regional structure and Other Relations

WFME is an organisation with six Regional Associations for Medical Education, in keeping with the Regional Offices of the World Health Organization. Regional Associations were established as late as 1983 for South East Asia and the Western Pacific Region. The Association of Medical Schools in the Middle East (AMSME) had ceased to be active, and was reconstituted as the Association for Medical Education in the Eastern Mediterranean Region (AMEEMR).

A major condition determining the administration of the Federation has been the vigour and inevitably changing effectiveness of the Regional Associations over four decades, with massive historical change not only in each of the regions of the world, but also in the political, academic and administrative structure of Medicine itself. The regional structure of the Federation was, and remains, crucial:

- Africa: The Association of Medical Schools in Africa (AMSA)
- Americas: The Pan-American Federation of Associations of Medical Schools (PAFAMS)
- Eastern Mediterranean: The Association for Medical Education in the Eastern Mediterranean Region (AMEEMR)
- Europe: The Association for Medical Education in Europe (AMEE)
- South East Asia: The South East Asian Regional Association for Medical Education (SEARAME)
- Western Pacific: The Association for Medical Education in the Western Pacific Region (AMEWPR).

WFME is in NGO status with the World Health Organization, in direct relationship to WHO Geneva Headquarters and its six Regional Offices, and close collaboration with the WHO Regional Directors.

In 1997, WFME strengthened its relationship to the United Nations Educational, Scientific and Cultural Organization (UNESCO), by contract, in a Collaboration Framework Agreement.

WFME is in formal relationship with the World Medical Association (WMA), and since 1997 with the International Federation of Medical Students' Associations (IFMSA). In 2007, the

Educational Commission on Foreign Medical Graduates (ECFMG) in USA became a coopted member. The Executive Council of WFME, the governing body of the Federation, reflects these relationships.

Presidency

Over the 40 years there have been four Presidents:

- 1972-1983: Andrés A. Santas, Argentina
- 1983-1996: Henry Walton, University of Edinburgh, United Kingdom
- 1996-2008: Hans Karle, University of Copenhagen, Denmark
- 2008- : Stefan Lindgren, Lund University, Sweden

The Central Office of WFME

The first location was from 1972-1983 at the Association of American Medical Colleges, Bethesda, Maryland, USA.

With the Presidency of Henry Walton, from 1983 to 1996, Edinburgh became the location. In 1986 the University of Edinburgh appointed Professor Walton to a second Chair as Professor of International Medical Education, believed the first in the world, and now general.

From 1996, when Hans Karle succeeded, the Central Office has been at the Faculty of Health Sciences in Copenhagen, hosted jointly by the University of Copenhagen and Lund University. The Office continued at Copenhagen with the succession of Stefan Lindgren in 2008.

The Federation has had three different logos, corresponding to the three different offices.

Functions of the World Federation

The main objectives of WFME are twofold, to serve as a *global forum* for medical educators worldwide, for enhancing the quality of medical education and, second, to improve the quality of health care to societies. The provision of competent medical personnel for the health sector is promoted by:

- Exchange of information
- Development of means for ascertaining the views of medical educators
- Promotion of research in medical education
- Implementation of programmes to strengthen the quality of medical education at all levels
- Promotion of programmes for relating medical education and health services, and
- Facilitation of liaison between medical educators and relevant international organisations.

Information services

WFME is closely related to the Journal *Medical Education*. Henry Walton was Editor of the *Journal* during his Presidency, and continuing as Emeritus Editor. In 1997, WFME became formally affiliated with the Journal, with advantageous provisions for information and publication in the *Journal*; Hans Karle is a member of the Editorial Board. Since 2001 the *Journal* has published a WFME Page 3-4 times yearly.

In 2004, a similar agreement was made with the Spanish Journal *Educación Médica*. Hans Karle is a member of the Editorial Board. WFME has also an agreement with the *South East Asian Journal of Medical Education*, and from 2012 also with the Journal *Medical Teacher*. WFME maintains corresponding relations with other medical education journals.

The *WFME website*, established in 1997, regularly updates information about policy and initiatives taken by the Federation; information about news and activities, including results of collaboration with members and other partners; and a calendar on conferences, seminars and other meetings of relevance for medical educators. All WFME publications are available free of charge on the website.. A renewed WFME website (*www.wfme.org*) has been developed in 2011.

The **WFME Pamphlet**, last updated in 2007, provides basic information about the Federation and its activities.

Finances

WFME had initially intended member and associate member associations to make annual contributions. In the event, most funding has been related to programme support, from such sources as the World Health Organization, the United Nations Development Fund, UNESCO, ECFMG, the major private Foundations, and some Governments.

Regional Associations have been unable to co-finance, and by policy no income fees charged to individual or institutional memberships. The Federation has engaged in active fund-raising, and since 1996 primarily supported by the host institutions.

THE BETHESDA PERIOD, 1972-1983

Andrés A. Santas the President, Henry van Zile Hyde the Secretary, and John Cooper the Treasurer, the first site of the Central Office was at Bethesda, Maryland in close cooperation with the Association of American Medical Colleges (AAMC) and the World Health Organization Regional Office for the America (PAHO). The Pan-American Federation of Associations of Medical Schools (PAFAMS) was always closely associated in all planning and action during this first phase.

Two major programmes were conducted by WFME, and other programmes cooperated with as summarised below.

The Physician and Population Change Programme

The focus of this programme was on the role of the doctor in relation to the social problems connected with uncontrolled population growth and was conducted in association with the World Health Organization, the World Medical Association, the International Planned Parenthood Federation the main funding partner. The importance of doctors' involvement at all levels of community life, with recommendations for the family planning and fertility control programmes were defined at a Bi-regional seminar was held in Bangkok in 1977 for the South East Asian and Western Pacific Regions; in 1978 a Tri-regional seminar for the Eastern Mediterranean, African and European Regions was convened in Tunis.

Medical Education and Health Care. Medical Schools Objectives

In 1976 planning was started by the Director General of the World Health Organization, Dr Halfdan Mahler, for a major international conference on primary health care. The theme was *Health for All*, with the purpose of making health care available to all segments of society particularly in deprived areas.

The Federation was a main co-sponsor together with the World Medical Association, the International Council of Nurses, the World Federation of Associations of Public Health, and with advisors from the Centre for Educational Research and Innovation, the Council for International Organizations of Medical Sciences, the International Association of Universities, the International Bureau of Education and the International Institute for Educational Planning.

The Federation's policy emphasized the integration of Education and Health, with the need for training of health personnel to meet the goals set by governments. The roles and responsibilities of universities and medical schools were explored for providing the leadership and educational services required by the communities they serve. Regional meetings were held to develop recommendations and strategies. A series of regional seminars, to consider the issues nationally and regionally in preparation of the world meeting, were held in Caracas and Manila, and a related consultation of Ministers of Education and Ministers of Health convened in 1978 in Teheran.

The culminating International Conference on Primary Health Care was held in Alma Ata, at that time in the USSR, in October 1978.

In this period, WFME combined with the Division of Health Manpower Development of WHO in a programme to elicit from medical schools information concerning their stated objectives.

Network of Community-Oriented Medical Schools

The Federation cooperated with the World Health Organization to organize a meeting of Deans of Medical Schools at Kingston, Jamaica in June 1979. WFME helped found and coordinate the "Network of Community-Oriented Medical Schools", coordinated from the University of Maastricht, Professor Ko Greep its chairman. The Network later became the Network of Community-Oriented Educational Institutions for the Health Sciences, its member institutions viewed as innovative medical schools. WFME continues to communicate with the Network, now designated Towards Unity for Health (TUFH).

THE EDINBURGH PERIOD, 1983-1996

During the Presidency of Henry Walton, the WFME Central Office was at Edinburgh, in administrative association with the University of Edinburgh. The Constitution of WFME was revised in terms of international law, definitively in 1994. The most prominent activity of the Federation was the *International Collaborative Programme for the Reorientation of Medical Education*.

The Reorientation Reform Programme for Medical Education

In 1984, WFME was called on to reform medical education internationally. The Federation proceeded to initiate the first such intensive global enquiry ever planned and the first such international investigation ever conducted. The WFME President appointed a Planning Commission in 1986, which compiled the *Six Major Themes* Document²

The document, consisting of 32 key questions which highlighted the key issues, was translated into many languages and sent to the Deans of all medical schools in the world. No specific actions were formulated in the document; rather it was designed so that those who educate and train doctors could actively discuss the problems identified in medical education. The responses received from Deans in each country were compiled into a *National Report*. National Conferences were then held throughout 1986, at which the Reports were analysed by experts from the country concerned.

The Reports from the national conferences were analysed by the six Regional Associations in 1987-88, which compiled regional discussion documents for further intensive consideration at *Six Preparatory Regional Conferences* in 1987-88. The Regional Conferences took place as follows: *Africa:* Brazzaville, *the Americas:* Rio de Janeiro. In this Region a different strategy was employed, with a central coordinating group synthesising national and subregional *Reports* originating in 18 countries, *Eastern Mediterranean:* Amman, *Europe:* Dublin, *South East Asia:* New Delhi, and *Western Pacific:* Kuala Lumpur.

The Edinburgh Declaration

The six Regional Reports, showing an astonishing degree of unanimity, were the basic documents, from which a *World Report* was compiled by the Planning Commission, which became the background material for the *World Conference on Medical Education in Edinburgh* in 1988. The Conference³ was invitational, with delegates attending from the six regions representing all countries worldwide.

The 1988 World Conference, at its final plenary session, expressed its recommendations in the ground-breaking *Edinburgh Declaration*.⁴ The principles of the Declaration are set out in Table 1. It proved to be a mandate for reform of medical education; its validity came from its having started from enquiry at national level, subsequently endorsed regionally, and finally adopted globally; it was globally agreed by medical educators by international consensus; it became formally accepted by many governments. It reflects the convictions of

medical teachers, medical students, medical doctors and other health professionals, and the general public around the globe; its parallel goal is improvement of health care for all the populations. The Declaration has been widely implemented.

Table 1

THE EDINBURGH DECLARATION (1988)

Actions within the medical School

- 1. Widen educational settings
- 2. National health needs as the context for curricula
- 3. Active learning methods (tutorial, self-directed and independent) for continuity of learning throughout life
- 4. Require professional competence (not mere knowledge recall)
- 5. Train medical teachers as educators
- 6. Prevention of illness and health promotion
- 7. Integration of science and clinical practice
- 8. Selection of applicants, for non-intellectual as well as intellectual attributes

Actions which require wider involvement

- 9. Coordination of medical education and health care systems
- 10. Balance in production of categories of medical staff and other health professions
- 11. Multi-professional training and teamwork
- 12. Provision for continuing medical education

.

Because so many of the recommendations emerging have legislative, legal and statutory implications, ministers of health and ministers of education were brought together with medical educators and health care administrators in *Ministerial Consultations* of 1988-89 at the regional level in all six Regions separately. Both ministries were required together because basic (undergraduate) medical education is with universities, while postgraduate training is with health departments.

The European conference was at Lisbon (its Recommendations named *The Lisbon Initiative*), the African in Nigeria, the South East Asian at New Delhi, the American at New Mexico, the Eastern Mediterranean at Cairo, and the Western Pacific at Kuala Lumpur.

Resolutions of the Health Parliament of the World

The World Health Assembly in 1989 endorsed The Edinburgh Declaration by adopting *WHA Resolution 42.38* of 19 May1989⁵. Thereby the governments of all member states calling on all member countries to implement principles of the Declaration.

As recorded below, the *WHA Resolution 48.8* of 12 May 1995, *Reorienting Medical Education and Medical Practice*⁶ five years later charged the Member States – all countries of the world - to reform their medical education systems to be supportive of national health care systems.

The Edinburgh Declaration was followed by a surge of reform worldwide greater than any since the start of the 20th century, and the Declaration remains an essential basis of reform and reorientation of medical curricula worldwide.

Entire regions of the world have in recent years changed their medical education systems in keeping with the 12 principles of the Declaration. For example, the Pan-American Federation of Associations of Medical Schools credits the Declaration accordingly, as do the National

Associations for Medical Education of many South American countries. With the Colombian Association (ASCOFAME) WFME co-sponsored the 1995 international conference at Bogota, sponsored in addition by WHO, the Pan-American Federation of Associations of Medical Schools (PAFAMS) and the Latin American Association of Medical Schools (ALAFEM).

Individual countries perhaps illustrate most explicitly the direct impact of the *Declaration*. An example is Portugal, where UNESCO and WFME with the Portuguese government and medical education authorities carried out a joint national project, using the *Declaration* as "a reform protocol of medical education in Portugal, at the request of the Ministers of Education and Health of that country" for reorienting the curricula of the medical schools. The recent monograph specifying in detail the extensively revised medical curriculum to be implemented in all the Faculties of Medicine in that country cites as its first reference the Edinburgh Declaration⁸.

This demonstration of the primary importance of the *Declaration* as the basis of reform and reorientation of medical curricula worldwide can be replicated by manifold instances where explicit acknowledgement is expressed. Equally frequent are the extensive national or institutional reforms which manifestly implement the principles of the *Declaration* without overt acknowledgement, but with the derivation of the reorientation plain to see. The validity of the *Edinburgh Declaration* remains uncontested as a global mandate for reform of medical education. The late James Grant⁹, Executive Director of UNICEF, spoke of "the historic *Edinburgh Declaration*", commenting it was a vision in 1988 but by the 1993 *Summit* the proposed reforms had become "practical, realistic and do-able".

The 1993 World Summit on Medical Education

The next major undertaking of WFME in the programme confronted a different challenge. Also held at Edinburgh, the invitational *World Summit on Medical Education* was entitled: "*The Changing Medical Profession*". It had to deal with sweeping changes in health care delivery throughout the world. Profound educational redefinition of medical doctors focused on new external and tangential forces affecting the entire practice of medicine, e.g. the managerial revolution, economic recession, and transformation of medicine into a business. Immense political changes also supervened; in Europe, the demise of Communism led to the rapid creation of 22 new countries; genocidal wars of barbaric ferocity were taking place.

The Summit made 22 specific recommendations¹⁰ under five sections: Practice and Policy; the Educational Response; the Continuum of Medical Education; Partners in Learning; and Settings for Learning (Table 2)

Table 2

WFME WORLD SUMMIT RECOMMENDATIONS, 1993

A. Practice and Policy

- 1. Bring together education and practice
- 2. Medical workforce planning: numbers & competency profiles
- 3. Health care systems development: medical schools involved in planning & delivery
- 4. Specialists & Generalists: a balance
- 5. The health transition: health profiles
- 6. AIDS & other chronic diseases

B. The Educational Response

- 7. Institutional policy & governance
- 8. Selection procedures
- 9. Medical teacher development for improved medical education
- 10. Medical student involvement in planning & evaluation
- 11. The place of science in relation to medicine
- 12. Ethical basis of medical education (clinics, hospitals & communities)
- 13. Teaching & learning strategies and methods
- 14. Curricular options for coping with information overload

C. The Continuum

- 15. Postgraduate education: a holistic view (manpower plan)
- 16. Continuing education: responsive to practitioner need

D. Partners in Learning

- 17. Health teams & multi-professional education
- 18. Participation of communities: community orientation
- 19. Communication with patients and the public
- 20. Wider participation in decision making, including the public

E. Settings for Learning

- 21. Real-world settings: various environments, medical & non-medical
- 22. Population-based medical education: commitment of universities including equity (universal coverage according to need).

As mentioned above, the *WHA Resolution 48.8* ⁶ repeated the same charge to member states to reform their medical education systems in keeping with the recommendations of the World Summit.

Implementation of the Summit Recommendations took place in the *Aftermath of the 1993 World Summit* with Regional Conferences during 1994-95 ^{11,12} which intensively explored, in the the local context, the crucial requirement that effective medical education is no longer possible without a close relationship between the health care system and the medical education system.

Clinical Competence, CME and Medical Manpower

WFME in the Edinburgh Period also helped organise World Conferences on: Assessment of Clinical Competence (Ottawa 1985 and 1986), which was the start of the *Ottawa Conferences* organised over the years alternatively in North America and elsewhere in the world. WFME has also contributed to subsequent Ottawa Conferences, which developed a broader perspective.

WFME was also involved in conferences on *Continuing Medical Education (CME)* at the Annenberg Centre in Palm Springs, USA, in 1986 and 1988, and on *Medical Manpower* in Acapulco, Mexico, in 1986).

Cooperation of WFME with WHO and Other Partners

The Federation has conducted all of its extensive record of global initiatives, for improving standards of medical education and hence improvement in health care delivery systems of countries worldwide, in the closest collaboration with WHO. Such collaboration was particularly intensive with both the 1988 World Conference and the 1993 World Summit on Medical Education. As the WFME President, Henry Walton presided, with the WHO Director-General opening the global meetings, and the six WHO Regional Directors among the main speakers.

As noted, the recommendations from both these major ventures were endorsed by *World Health Assembly Resolutions*, framed by both WHO and WFME. Extensive administration by WHO was required, to enable the health parliament of the world to deliberate, and at length to endorse the outcomes of the two global Conferences. The major implication is that, by adopting WHA Resolution 42.38 of 1989 and WHA Resolution 48.8 of 1994, all Member Nations have undertaken to further the two sets of *Recommendations*.

In addition to close collaboration with the WHO Geneva headquarters, WFME has always maintained the closest links with the six WHO Regional Offices, and the six WHO Regional Directors. Indeed, the Regional Associations of WFME accord geographically with the six WHO Regions

WFME allied itself, throughout the entire reform process with the other UN agencies concerned with health: UNESCO, UNICEF, UNDP, and the World Bank; the international NGOs partnering the Federation; the great Foundations; and by the national governments. Changing emphasis has been given to these partners at different stages of the WFME Programme.

THE FIRST COPENHAGEN PERIOD, 1996-2008

The Executive Council elected Hans Karle as President in 1996. As outgoing President, Henry Walton continued as a member of the WFME Executive Council, the Constitution making such provision to ensure that continuity was maintained.

The CLUCIME Collaboration

In 1996 a conjoint provision was established by agreement between the Universities of Copenhagen, Denmark and Lund, Sweden. The Faculty of Health Sciences, University of Copenhagen and the Faculty of Medicine, Lund University agreed to provide strategic and scientific support for the central WFME Office. This initiative, named the *Copenhagen-Lund University Centre for International Medical Education (CLUCIME)*, designated teachers and administrators from the two Faculties in the *Øresund Region*, to meet four times each year.

In addition to overseeing the WFME Office, the group also developed *Guidelines for Using Computers in Medical Education*, and formulated *Recommendations for education in Evidence-Based Medicine*. The Centre has received medical teachers from a number of countries visiting the two universities. The Centre organised the WFME World Conference in 2003.

The WFME Global Standards Programme

The Federation undertook to extend the Reorientation of Medical Education Programme to focus more in the direction of the individual educational institutions. Objectives were formulated to stimulate all medical schools and related educational institutions to identify and formulate their specific needs for reform and quality improvement, by assessing their own strengths, weaknesses, potentials, capabilities and needs for change; WFME now aimed to establish a system of national and, in the future, international accreditation of educational programmes for assuring minimal quality requirements in medical education, as a basis for international approval of doctors and for exchange of medical students. The *Position Paper of the WFME Executive Council*¹³ in 1998 outlined a procedure for development of standards for quality improvement of medical education, in the global context, to be applied by institutions responsible for medical education, and in educational and training programmes throughout the continuum of medical education. All phases of medical education and training were thus to be covered.

Development of the WFME Trilogy

In developing Global Standards, the WFME appointed three *International Task Forces*, one for each of the three phases of medical education:

- i. basic (undergraduate) Medical Education (BME);
- ii. postgraduate medical education (PME); and
- iii. continuing medical education (CME)/professional development of medical doctors (CPD).

The International Task Forces worked through initial formulation of a proposal by a *Working Party* meeting on a retreat basis, and further developed by a broader *International Panel of Experts*, communicating mainly electronically. Members of the Task Forces were selected on basis of their expertise and with best possible geographical coverage given particular attention. In all, 76 experts were included, with some overlapping between groups.

The concept, purpose and rationale of global standards for medical education, including advantages and reservations regarding the use of international standards, as well as the principles used in defining standards were discussed in the *Report of the Working Party of the BME Taskforce*¹⁴. The standards were designed to enable medical schools at various stages of development, and with different educational, socio-economic and cultural conditions, to use the system of standards at a level appropriate to them, and as a template for development of institutional, national and regional specifications. Standards were intended to function as a lever for change and reform. Thus the WFME Standards are framed to specify attainment at two different levels:

- (a) basic standards or minimum requirements, specifically useful for recognition or accreditation purposes; and
- (b) standards for quality development, to be used in reform of institutions and their programmes.

In keeping with the fact that the medical workforce in principle is globally mobile, the WFME Standards would seek to ensure adequate educational attainment of migrating doctors; such standards would thus serve as necessary quality-assurance credentials of doctors wherever they are based. While the medical workforce cannot be immune to the increasing internationalisation, the Standards are not aimed at promoting increased medical mobility and thus brain drain of doctors from the developing world.

The Standards documents, structured in a model of 9 *Areas*, each with a number of *Subareas*, and adjusted in keeping with the specificities of the three phases of medical education, were discussed on many occasions and at numerous settings around the world. The compiled result: the *Trilogy of WFME Global Standards for Quality Improvement in Medical Education* ¹⁵⁻¹⁷ was published and considered at the Copenhagen World Conference in 2003.

Validation of the Trilogy

The Working Party for *BME Standards*, at its second meeting in 2001, proposed to conduct pilot studies on the Standards in a number of medical schools internationally. The invited schools were augmented by new schools in 2002, and again after the 2003 World Conference. In all 36 medical schools participated in the evaluation, preliminary results were presented at the 2003 World Conference, and the published Report of the Pilot Study¹⁸ demonstrates the Standards as realistic, and adequately divided between basic and quality development levels; the need for local and national specifications and supplements was shown. The value of the Standards in institutional self-evaluation was confirmed as a positive event, with lasting and constructive consequences for reform.

Similar pilot studies on validation of *PME and CPD Standards* were started during 2003/04 in a number of institutions and organisations. The main conclusion from these studies was that self-evaluation in these later phases presents a greater challenge, reflecting that the institutional basis for training is more fluid at the higher levels. Given these challenges, it has

been more difficult to evaluate the extent of attainment of the Standards, but an undertaking considered to have been useful in many countries.

The WFME Copenhagen World Conference 2003

Organised by WFME in cooperation with WHO, UNESCO, the World Medical Association, and the Universities of Copenhagen and Lund University, and with Her Majesty Queen Margrethe II of Denmark as Patroness, the *WFME World Conference: Global Standards in Medical Education for Better Health Care* was held in Copenhagen in March 2003. The WFME Global Standards Documents were adopted as the background material for the Conference. The main themes of the Conference were: (1) The Interface of Health Care and Medical Education; (2) The Concept of Global Standards; and (3) Implementation of Standards in Medical Education.

Six Pre-conference Symposia took place at Lund University: (a) Globalisation of Medicine; (b) Restructuring the Health Care Sector and Medical Education; (c) Scientific Developments and Medical Schools; (d) New Ways of Teaching and Learning in Medicine; (e) Assessment and Standards in Medical Education; and (f) Medical Education Crossing National Boundaries

More than 500 participants from 88 countries from all six Regions attended. They strongly supported the WFME policy on standards^{19,20} and Recommendations for future work were compiled at a Post-conference seminar for invited experts.

A main emphasis emerged that adoption of the Trilogy in no way leads to uniformity of medical education, nor constitutes a threat to national manpower planning. The status of the Trilogy is as a quality-improving instrument, to be used in conjunction with existing accreditation of educational programmes; it's potential incorporation promised to make the WHO World Directory of Medical Schools into a quality assurance instrument.

Implementation of the Global Standards Programme

The outcome of the 2003 World Conference has been extensive, numerous courses of action taken. First and foremost have been the many measures to ensure *dissemination of information* about the programme, initiated with the initial development of the Standards documentation. Since the inception of the process, more than 80 publications have reported the WFME Global Standards, which have also been presented and discussed at more than 180 national and international conferences in all parts of the world.

To facilitate the use of the Standards, *translations* have appeared into numerous languages (the BME Standards into more than 20, and the PME/CPD Standards into six languages).

Institutional self-evaluation and reform of Medical Schools and their Programmes and national standard setting has been the intrinsic aspect of the implementation process. The WFME Office has compiled records evidencing that adoption of the WFME Standards in Basic Medical Education process has now influenced to various degrees medical education curricula in more than half of the medical schools of the world. BME Standards are currently influencing criteria for national recognition/accreditation in more than 20 countries

internationally, the clearest examples being Australia, China, Ecuador, Egypt, Iran, Ireland, Jordan, Kazakhstan, Spain, Sudan, Sweden, Switzerland, Thailand and Turkey. In a number of other countries such as the USA and the United Kingdom, where rigorous standards have been in use for a long period, it is found that their criteria are often to a high degree consistent with the BME Standards.

By 2002, the WFME programme had influenced revision of *Regional Standards in the Western Pacific Region*²¹. *European Specifications*²² were published in 2007 by the Quality Assurance Task Force, conducted jointly by WFME and the Association of Medical Schools in Europe (AMSE) as part of a European Union sponsored project: Thematic Network *MEDINE* on Medical Education in Europe and *Eastern Mediterranean Regional Standards* published in 2011²³.

The pilot studies identified the need for assistance to medical schools, and other educational institutions, organisations and agencies in using the Standards. In 2004 WFME organised a new International Task Force, which developed plans for a *WFME Advisor Function*; and a *Manual for Advisors* was published 2005²⁴. On this basis, WFME has participated in site visits at a number of medical schools around the world.

Together with the Open University Centre for Education in Medicine (OUCEM), later renamed Centre for Medical Education in Context (CenMedic), and The Foundation for the Advancement of International Medical Education and Research (FAIMER), WFME has developed *distance learning material* on a number of topics relevant for quality promotion of medical education. The material also includes elements relevant for the use of the WFME Standards on a broader international scale. The modules developed and offered to medical schools comprise topics such as Standards in Medicine, Organising a Self-Review, Gathering, Analysing and Presenting Evidence for Self-Review, and Self Review in Low-Resource Circumstances. Modules on Planning External Review and on Purposes and Methods of Accreditation were developed in 2011.

Impact on Education of Other Health Professions is demonstrated by some national and international organisations having decided to use the WFME Global Standards as basis for their own standard formulation. Examples can be found in disciplines such as dentistry, nursing, veterinary medicine, and chiropractic medicine.

In 2006, WFME accepted a request from WHO to participate in a project on development of global standards for basic nursing education. The final report, published in 2009 by the Nursing and Midwifery Section on Human Resources for Health, WHO, Geneva²⁵ reflects that impetus was derived from the WFME Standards.

Approval by International Organisations was achieved as the WFME Global Standards Programme was the subject of a World Medical Assembly Resolution in 2003, and approved at the 2004 WMA Assembly. The International Federation of Medical Students' Associations (IFMSA) early in the programme undertook to stimulate the medical students' organisations to work for reforms in accordance with the WFME Standards, expressing the initiative in a Policy Statement on Implementing International Standards in Basic Medical Education. In 2008, IFMSA adopted the European Specifications of the WFME BME Standards.

The European Specifications on the WFME Global Standards were adopted by the Association of Medical Schools in Europe (AMSE) in a Declaration on quality assurance in medical schools.

The WFME Global Standards have been approved by numerous specialty organisations, including the *Comité Permanent des Médicins Européens, the European Union of Medical Specialists* and the *World Organisation of Family Doctors (WONCA)*.

Partnership with WHO

Collaboration with WHO was essential in all phases of the WFME Global Standards Programme. Contact with the WHO Headquarters has been close, progress frequently discussed with the Regional Directors. The Director-General, Dr. Gro Haarlem Brundtland gave the opening lecture at the 2003 WFME World Conference.

The collaboration made clear the need for even closer collaboration between WHO and WFME in developing high quality medical education, and in January 2004, a *WHO/WFME Strategic Partnership to Improve Medical Education* was formed between the two bodies²⁶. The topics identified for attention under this partnership were: setting up of a shared database for quality improvement procedures in medical schools; promotion of partnership between schools to foster innovative education; means for updating management structures of medical schools; and assistance to institutions or national/regional organisations and agencies in developing and implementing reform programmes and establishing recognition/accreditation systems.

The WHO/WFME Partnership was also developed in collaboration with the WHO Regional Offices. A series of national and inter-country conferences were held in the WHO European Region over the following years in the CIS countries, centred on standards, accreditation, specialisation, consequences for medical education of the Bologna Process, and clinical training programmes.

Promotion of Accreditation

That the WFME Global Standards would have a status as an accreditation instrument was recognized from the outset of the Standards programme. Accreditation was not then a main purpose. The position taken by WFME was that only nationally appointed agencies can be directly responsible for accreditation procedures in any country. At the same time, it was also considered that WFME could have a role in assisting with establishing relevant and acceptable accreditation procedures; that globally adopted standards could function as a template for agencies designated to implement accreditation and other types of recognition; and that it would be appropriate for WFME to develop guidelines for valid accreditation.

Following the establishment in 2004 of the WHO/WFME Strategic Partnership, as a direct outcome of the 2003 World Conference, the two organisations decided to set up an *International Task Force on Accreditation*, which began work at a retreat seminar in October 2004 in Copenhagen. It was stated that, in general, while WHO/WFME could not be accrediting bodies, they should promote and review regional/national standards, promote institutional self-evaluation, define accreditation guidelines, promote and support

accreditation systems, and develop the WHO Directory of Medical Schools as a quality assuring instrument.

In the following year, as a result of this work, the *WHO/WFME Guidelines for Accreditation in Basic Medical Education*²⁷ outlined the principles for valid accreditation, later translated into Russian, Spanish and Persian. The document also provides recommendations concerning accreditation in countries with just one or a few medical schools.

Also in 2005, WFME formulated a programme on *Promotion of Accreditation of Basic Medical Education*²⁸ within the framework of the WHO/WFME Partnership. The project provided a package for assistance, including development of national specifications of the WFME Global Standards, and provisions for institutional self-evaluation and external review, as well as procedures for accreditation.

In a discussion paper on "International Recognition of Basic Medical Education Programmes", published in 2008 by the WFME Executive Council²⁹ accreditation, when conducted properly, was recommended as the optimum procedure. Implied is the use of procedures which include self-evaluation and external review, and the use of both general higher education and specific medical criteria. The paper also emphasised the limitations and pitfalls of accreditation and argued for simpler systems to be developed including reliable information through an extended database.

The Avicenna Directory of Medical Schools

WFME has long been in negotiation with WHO about modernisation and development of the *WHO World Directory of Medical Schools*.³⁰

In 2005 WHO had decided to establish a new *Database on Health Professions Educational Institutions*. The goal was to promote comprehensive coverage by progressively including other academic health professions institutions in addition to Medicine.

Negotiations, started through WFME between WHO and the University of Copenhagen, resulted in an agreement which in 2007 transferred the WHO database the University with the assistance of WFME. The new database for medicine was designated *The Avicenna Directory of Medical Schools*³¹, and from 2008 the first compilation of medical schools based on an extensive questionnaire, tested in a pilot study comprising 30 medical schools from all six Regions, became operative at the new web-site (*www.avicennadirectories.org*). A new web interface was developed with seven sections: general information; affiliations; admission; staff & students; facilities; programme and recognition. As was the case with the former WHO World Directory of Medical Schools, inclusion in the Avicenna database does not in any way imply formal recognition of an institution, either by WFME or WHO.

Higher Education Across Borders

WFME participated in the project being conducted jointly by the Organisation for Economic Co-operation and Development (OECD) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) on quality aspects of cross-border higher education,

launched in 2004 as an educational response to the General Agreement on Trade in Services (GATS). The programme for this global project included three major sessions at the UNESCO and OECD Headquarters. WFME was invited to present its standard programme as a model for quality higher education. The result of the project was the development of *Guidelines on Quality Provision in Cross-border Higher Education*, published in 2006, 32a&b which provides an overview of the problems and recommendations in the area of cross-border higher education.

Debate on the Bologna Process

In 2004 WFME undertook to work together with the Executive Council of the Association of Medical Education in Europe (AMEE) to explore the potential impact and influence on medical education of the *Bologna Declaration and Process for Higher Education in Europe*. In 2005, the two organisations, in consultation with the Association of Medical Schools in Europe (AMSE) and the World Health Organization, Europe (WHO-Euro) published a *Statemen on the Bologna Process and Medical Educationt*³³ which proposed that medical schools should not be obliged to adopt the two cycle system of the Bologna Process. Subsequently AMEE choose to dissociate from the position stated, the debate continued on several settings, e.g. in the Bologna Handbook³⁴ and later in a WHO Policy Brief³⁵

Relations with the WFME Regional Associations

Ensuring that the Regional Associations flourish is a priority of the Central Office of the Federation. As has always been the practice, the President formally participates in the Executive Meetings of the WFME Regional Associations. WFME has also engaged in scientific meetings organised in the Regions.

At a WHO meeting organised in Bangkok in 2005, WFME participated in the critical necessity to help revitalise the South-East Asian Regional Association for Medical Education (SERAME). A new constitution was approved, and with the support of the WHO-SEARO Office a secretariat established at Chulalongkorn University, Bangkok, Thailand. At the same time, the *South East Asian Journal of Medical Education* was established.

THE SECOND COPENHAGEN PERIOD, 2008 -

In 2008, the WFME Executive Council elected Stefan Lindgren as President, with Hans Karle remaining as a member of the WFME Executive Council. Thus the WFME Office maintained its location in the Øresund Region, continuing to be hosted jointly by the University of Copenhagen, Denmark and Lund University, Sweden.

Progress with Projects

Implementation of the WFME Trilogy of Global Standards for Quality Improvement of Medical Education has continued and they are now used extensively all over the world, offering medical education institutions at various stages of development, and with different educational, socio-economic and cultural conditions, a template for development of national and regional standards, and a lever for reform. The final result should be seen as a limited revision respecting the overall principles and structure of the standards and basically defining the same standards as in the original document of 2003.

The *Global Standards for Basic (Undergraduate) Medical Education* has achieved wider use than the Standards for Postgraduate Education and for Continuing Professional Development. In 2011-2012 these Standards were revised and updated by a small Working Party in collaboration with a broad International Panel of Experts. The most important changes were a division of standards in separate sub-standards and introduction of a number system, tranferral of some quality developmental standards to the basic level in accordance with the international development in medical education, and significant expansion and elaboration of the annotation sections³⁶.

Inclusion of new medical schools and the systematic and comprehensive data collection in the *Avicenna Directory of Medical Schools* has been continued. The plan to expand to encompass other health professions educational programmes has been postponed.

In 2010 WHO and the University of Copenhagen transferred their responsibility for the Avicenna Directory to WFME, and negotiations to merge the Avicenna Directory with the International Medical Education Directory (IMED) of the Foundation for Advancement of International Medical Education and Research (FAIMER) were initiated in collaboration with users of the data-base among major regulatory bodies.

In 2012 an agreement was made between the two organisations jointly, and in collaboration with WHO and the University of Copenhagen, to develop and publish a *New World Directory of Medical Schools*, incorporating the Avicenna Directory of Medical Schools and the International Medical Education Directory.

PhD Standards

A collaborative project was initiated jointly in 2009 by ORPHEUS (Organisation for PhD Education in Biomedicine and Health Sciences in the European System), AMSE (Association of Medical Schools in Europe) and WFME on the need for standards for PhD education in Europe. The result was the publication in 2012 of *Standards for PhD Education in Biomedicine and Health Sciences in Europe*³⁷. Extension of the project to specify Global

Standards for PhD Education in Biomedicine and Health Sciences will be a subject for discussion.

Participation in Social Accountability Project

WFME participation in a *Global Consensus Project for Social Accountability of Medical Schools*³⁸, initiated in 2010, aims to emphasize further the interaction between medical schools and societal stakeholders to meet the health care needs of patients and societies. This initiative continues the policy formally adopted at the WFME 1993 World Summit, and endorsed by the World Health Assembly in 1995⁶. Through such insistence that medical education and delivery of health care are inextricably linked, WFME promotes awareness of anomalies, such as that new medical schools continue to be established without social accountability being expressed in their mission and objectives³⁹.

.

Accreditation of Institutions and Programmes

A pressing need for systems of international recognition has been formulated by WFME²⁸. The need is made ever more pressingly necessary by the uncontrolled increase in the number of medical schools world-wide. WFME promotes valid national and regional accreditation as the most effective measure for quality assurance³⁹.

The role of international accreditor is not to be assumed by WFME, nor by any other unitary organisation. The proper national or regional authorities are primary. However, international recognition through accreditation can only be on the basis of globally accepted and transparent *standards*, implemented by an internationally accepted accreditation procedure. The *WFME Global Standards*, at the basic level, provides the instrument for criteria to be implemented, augmented by guidelines published in 2005 by WFME and WHO for the accreditation process ²⁶.

As a model for potential WFME involvement, the Caribbean Accreditation Authority for Education in Medicine and Other Health Professions (CAAMP- HP) was in 2011-12 evaluated by WFME, members of the WFME Executive Council constituting the body monitoring the accreditors. It is proposed that WFME, in collaboration with its six WFME Regional Associations, could have an important role in such an international evaluation development. Several other agencies responsible for national accreditation have expressed readiness to be involved and a programme for such a system of *meta-accreditation of medical schools* was activated in 2012.

The Global Role of the Doctor

Medical education at all levels must reflect the health challenges in contemporary society. Definition of the role of the future doctor, and professional competencies required, must be global as well as responsive to particular cultures and regions^{40,41}. WFME in 2010 set up an *International Task Force* for defining the field. Key parameters identified by the group were: professionalism; the doctor as communicator, educator and researcher; and as manager

of health care; demographic changes; and migration. Thus, WFME is in a process of renewing its longterm engagement in the roles of the medical profession.

Preparation of a New WFME World Conference

In 2009, the Executive Council of WFME undertook to celebrate the WFME 40th Anniversary with a World Conference in 2012, under auspices of the six Regional Associations of WFME, the World Health Organization, the World Medical Association, the International Federation of Medical Students' Associations, and the University of Copenhagen and Lund University. The main topics selected were: Revision of WFME Global Standards for Basic Medical Education; Developments in Postgraduate Medical Education and Continuing Professional Development; Standards for PhD Education; International Recognition of Institutions and Programmes; and the Future Global Role of the Doctor in Health Care.

Unfortunately, as a consequence of the international financial crisis, the conference had to be postponed.

PRIORITIES OF WFME

Experiences of 40 years activity confirm that the Federation has contributed significantly to quality development of international medical education. The role in the next period is as follows:

WFME is officially recognised as the global organisation representing medical educators and medical education worldwide.

WFME is the global agency for quality development of medical education and for support in accreditation responsibilities.

The Federation currently implements the use of

- The Global Standards for Quality Improvement of Medical Education,
- The New World Directory of Medical Schools
- The Meta-Accreditation of Medical Education.

WFME seeks to advance the status and responsibility of its *Regional Associations* and to promote their activities.

The *WFME Central* O*ffice* is responsible for maintaining the Federation's duty to its constituency of medical educators, medical graduates and medical students, and their educational institutions worldwide.

REFERENCES

- 1. Flexner A. Medical Education in the United States and Canada. A Report to the Carnegie Foundation for the Advancement of Teaching. Bulltin No 4. New York: Carnegie Foundation,1910.
- 2. Planning Commission, World Federation for Medical Education. Six Major Themes. *Med Educ* 1986; **20**:378-89.
- 3. World Federation for Medical Education. Report of the World Conference on Medical Education. WFME, Edinburgh, 1988.
- 4. World Federation for Medical Education. The Edinburgh Declaration. *The Lancet* 1988; ii, 464.
- 5. World Health Assembly. WHA Resolution 42.38 WHO, Geneva, 1989.
- 6. World Health Assembly. WHA Resolution 48.8. Reorientation of Medical Education and Medical Practice for Health for All. WHO, Geneva, 1995.
- 7. Badran A. State of Health Education in the World: The Assessment by UNESCO. In: Proceedings of the World Summit on Medical Education. Med Educ 1994;28 (Suppl.1):16
- 8. Sociedade Portuguesa de Educacao Medica. Formacao Medica no Ambito do Novo Plano Curricular das Faculdades de Medicina Portuguesas. Cadernos de Educacao Medica, Lisbon,1988, p. 19.
- 9. Grant JP. Medical Education: Finishing the Unfinished Business. UNICEF, NewYork 1994
- 10. World Federation for Medical Education. Proceedings of the World Summit on Medical Education. Med Educ 1994; 28 (Suppl.1)
- 11. World Federation for Medical Education. Proceedings of the Eastern Mediterranean Regional Conference on Medical Education. *Med Educ* 1995;**29** (Suppl.1).
- 12. Report on the Ministerial Consultation on Medical Education and Health Services. Cairo, Cosponsored by WHO, UNESCO and WFME. WHO, Alexandria, EMRO/HRH/567-E/L' 1995, pp. 5-6.
- 13. The Executive Council. The World Federation for Medical Education. International standards in medical education: assessment and accreditation of medical schools' educational programmes. A WFME position paper. *Med Educ* 1998;32:549-58.
- 14. WFME Taskforce on Defining International Standards in Basic Medical Education. Report of the Working Party, Copenhagen, 14-16 October 1999. *Med Educ* 2000;**34**:665.675.
- 15. Basic Medical Education. WFME Global Standards for Quality Improvement. WFME Office, Copenhagen, 2003. WFME website www.wfme.org
- 16. Postgraduate Medical Education. WFME Global Standards for Quality Improvement. WFME Office, Copenhagen 2003. WFME website www.wfme.org
- 17. Continuing Professional Development (CPD) of Medical Doctors. WFME Global Standards for Quality Improvement. WFME Office, Copenhagen 2003. WFME webside www.wfme.org
- 18. Grant J, Marchall J and Gary N. World federation for Medical Education. Implementation of WFME Global Standards in Basic Medical Education. Evaluation of Pilot Studies. WFME Office, Copenhagen, 2004.
- 19. van Niekerk JP de V. Commentary: WFME Global Standards Receive Ringing Endorsement. *Med Educ.* 2003; **37**:585-86

- 20. van Niekerk JP de V, Christensen L, Karle H, Nystrup J. WFME Global Standards in Medical Education: Status and Perspectives following the 2003 WFME World Conference. *Med Educ* 2003;**37**:1050-54.
- 21. Guidelines for Quality Assurance of Basic Medical Education in the Western Pacific Region. WHOWPR, Manila 2002.
- 22. Quality Assurance Task Force, the Thematic Network on Medical Education in Europe. WFME Global Standards for Quality Improvement in Medical Education. European Specifications. WFME Office, Copenhagen 2007.
- 23. World Health Organization. Regional Office for Eastern Mediterranean. Eastern Mediterranean Regional Standards for Accreditation of Health Professions Education. WHO, EMRO, in collaboration with WFME and AMEEMR 2011.
- 24. World Federation for Medical Education. Manual for WFME Advisors. WFME Office, Copenhagen 2005.
- 25. Global Standards for the Initial Education of Nurses and Midwives. Report from the Nursing and Midwifery Section on Human Resources for Health. WHO, Geneva 2009.
- 26. WHO/WFME Strategic Partnership to improve Medical Education. Geneva/Copenhagen 2004. WHO website www.who.int and WFME website www.wfme.org
- 27. WHO/WFME Guidelines for Accreditation of Basic Medical Education. Geneva/Copenhagen 2005. WFME website www.wfme.org
- World Federation for Medical Education. Promotion of Accreditation of Basic Medical Education. A Programme within the Framework of the WHO/WFME Strategic Partnership to Improve Medical Education. WFME, Copenhagen 2005, WFME website www.wfme.org
- 29 Karle H on behalf of the Executive Council, World Federation for Medical Education. International recognition of basic medical education programmes. *Med Educ* 2008;**42**:12-17.
- 30. World Health Organization. World Directory of Medical Schools, 7th ed. Geneva: WHO 2000
- 31. Gordon D, Christensen L, Dayrit M, Dela F, Karle H and Mercer H. Educating Health Professionals: the Avicenna project. *The Lancet* 2008;**371**:966-67.
- 32a. Organisation for Economic Co-operation and Development. Guidelines for Quality Provision in Cross-border Higher Education. Paris: OECD, 2005.
- 32b. United Nations Educational, Scientific and Cultural Organization. Guidelines for Quality Provision in Cross-border Higher Education. Paris. UNESCO, 2005.
- 33. WFME & AMEE. Statement on the Bologna Process and Medical Education. Copenhagen 2005. WFME website www.wfme.org
- 34. Gordon D, Christensen L and Karle H. Medical Education in the Bologna Process. A Critical appraisal of current practice and implementation. Bologna Handbook No 14. www.handbook-bologna.com
- 35. Gordon D, Karle H and Christensen L. The Bologna Process and its Relevance in Medicine. WHO Policy Brief. WHO-Euro 2012
- 36. World Federation for Medical Education. Basic Medical Education. WFME Global Standards for Quality Development. The 2012 Revision. WFME website www.wfme.org
- 37. ORPHEUS AMSE & WFME. Standards for PhD Education in Biomedicine and Health Sciences in Europe. A publication from ORPHEUS-AMSE-WFME. Aarhus University Press, Denmark 2012.
- 38. Global Consensus on Social Accountability. Global Consensus on Social Accountability 2010. http://healthsocialaccountability.org

- 39. Lindgren S & Karle H. Social Accountability of Medical Education. Aspects on Global Accreditation. *Medical Teacher* 2011; **33(8)**.667-72
- 40. Gordon D & Lindgren S. The global role of the doctor in health care. The *World Medical & Hlath Policy Journal*. 2010, http://www.psocommons.org/wmhp/, 2, Issue
- 41. Lindgren S & Gordon D. The doctor we are educating for a future global role in health care. Medical Teacher, 011;33(7):551-54.