Evolution of Medical School Systems in Europe

Are we at a Risk?

Proceedings of the Joint Symposium of the Association of Medical Schools in Europe (AMSE) and the German Medizinische Fakultätentag (MFT)

Berlin, 13 – 14 September 2014

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office@amse-med.eu

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Introduction

Peter Dieter

President of the Association of Medical Schools in Europe, Berlin

Ladies and Gentlemen,

It is a great pleasure to welcome you at the joint symposium of the Association of Medical Schools in Europe and the German Medical Faculty Association (MFT) in Berlin. The symposium entitled "Evolution of Medical School systems across Europe. Are we at a risk?" will address in the next two days the quality of medical education, medical schools and affiliated academic teaching hospitals in Europe from different angles. I am very proud that we welcome today 50 participants from 18 countries to this symposium.

In planning the conference, we decided to invite experts from the various stakeholders to voice their ideas and opinion on this important topic. We have therefore invited colleagues from medical education, deans and students, from university hospitals, regulatory authorities, WFME and WHO Europe. We have also tried, unfortunately without success to get politicians from Brussels to hear their opinion here. But I am sure that the dialogue with politicians in the individual countries and from Brussels on the quality assurance of medical education, medical schools and affiliated academic teaching hospitals, as well as on the automatic recognition of licenses will continue.

Let me say a few words about the background of this symposium. In the recent past, there was an enormous increase of private and non-private medical schools in Europe and around the world. You might know the establishment of a new medical school is regulated differently in each country, either through accreditation or by a political de-

cision. In Europe there are no uniform quality standards or quality assurance procedures for medical education, schools and affiliated hospitals and accordingly no uniform standard for medical licenses. You also might know that for a few years there is an automatic recognition of licenses within Europe. You see that the different quality standards in the countries on the one hand and the automatic professional recognition of medical licenses on the other hand may pose a risk.

This issue will be the main theme of this conference. A view in the World Directory of Medical Schools shows that at present there are about 2,400 medical schools in 180 countries worldwide. The WHO announced recently that there is a growth of medical schools worldwide of about 30 %. In Europe, this looks very similar. However, the situation varies from country to country: whereas in Germany the number of medical schools is relatively stable, in Turkey for example many new medical schools have been opened in recent years.

In the individual countries we also find differences in:

- the duration of the study (between four and seven years),
- the type of the study and the degree (Bachelor/Master/Diploma/Doctor, etc.),
- the eligibility criteria (entrance exams, interviews, grades, etc.),
- the curriculum (teaching formats) and assessments (national state examination vs Faculty assessments).

I assume that you are familiar with the EU Directives 2005/36/EG and 2013/55/EU which also provide information on the length of medical studies in Europe. This policy was changed in 2013 and now states that a medical study within Europe can last for a minimum period of five years (instead of previous six years) with a minimum of (as before) 5,500 hours teaching. This means that the curriculum must now be very condensed. Member states shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 18 January 2016.

I wish you for the next two days interesting presentations and critical discussions and now pass to the host, Josef Pfeilschifter.

Josef Pfeilschifter

Board of the German MFT Medizinische Fakultätentag, Frankfurt

Mr President, dear Peter,

Dear Colleagues,

It is a great pleasure for me to welcome you all on behalf of the German Association of Medical Faculties – the MFT. As a member of the MFT board it is one of my responsibilities to chair our group on educational affairs. I think it is high time for the forum of the representatives of the European Medical Faculties, that is the Association of Medical Schools in Europe, to further strengthening the ties between the different countries and the individual schools. It is high time that we discuss current developments within the medical school systems within Europe.

Let us reconsider some deciding points for defining the quality and the value of Medical Schools.

1. Entrance requirements
2. Size and training of the Faculty
3. Sum available for endowment and fees for the support of the institution
4. Quality and adequacy of the laboratories provided for the instruction of the first three years and the qualifications and training of the teachers of the so-called preclinical branches
5. Relation between Medical School and Hospital including particularely freedom of access to beds and freedom in the appointment by the School of the Hospital physicians and surgeons who automatically should become clinical teachers

This five point statement is a quote taken from the autobiography of Abraham Flexner – "I remember" – from 1940. It summarises the criteria Flexner developed in his famous report "Medical Education in the United States and Canada", published in 1910 as Bulletin Number Four by the Carnegie Foundation. We have the original in Frankfurt, and we are very proud of this.

These criteria sound surprisingly up-to-date to me. They can be used as a benchmark for looking for our own Faculties and Universities. What has to be avoided is that we fall behind Flexner by accepting institutions as Medical Faculties or Universities if they do not meet the necessarily high standards of educating tomorrow's doctors.

Above all I wish today's meeting lively discussions, new ideas and stimuli for each institution for the respective countries and for our future cooperation. Thank you very much and a heartily welcome!

Medical education and students

Training the future global medical work force – challenges and consequences

Trudie Roberts

President of the Association for Medical Education in Europe, Dundee

Healthcare delivery is changing rapidly in every part of the globe. In this talk I explore the rights and expectations of major stakeholders including regulatory, governments, the medical profession, students and patients in respect to medical undergraduate training. How should medical schools respond to these challenges? At a time when Universities themselves are coming under increasing scrutiny are they still the best places to train and educate tomorrow's medical workforce? In many countries new education providers are planning to training student doctors. How might this change the face of medical education in the next decade and what are the challenges and consequences, good and bad, of these developments.

Medical education in Germany – where do we go from here? Recommendations of the German Council of Science and Humanities and the European perspective

Hans-Jochen Heinze

The German Council of Science and Humanities, Cologne

In July 2014, the German Council of Science and Humanities (Wissenschaftsrat) passed recommendations on Medical Education in Germany. The recommendations deal with how the academic education of physicians should be structured and designed in future to meet the growing requirements of the medical profession under increasingly complex healthcare circumstances.

According to the Council, the traditional focus on separate academic disciplines should be replaced by education oriented towards medical roles and competencies, based on integrated, patient-centred curricula. The course content should therefore be taught primarily in interdisciplinary, organ and topic-based modules, and pre-clinical and clinical content should be integrated bidirectionally. The Council emphasises the necessity of strengthening scientific knowledge and reasoning among doctors early in training, during undergraduate and graduate education. Scientific thinking and action form the basis of appropriate patient-oriented selection of diagnostic and therapeutic measures. Therefore, obligatory development of scientific competencies in a degree programme is essential to responsible, professional work as a medical doctor, requiring specific courses to enhance scientific competencies corresponding with each module. These classes should build on one another, over multiple semesters (longitudinal strand). Furthermore, the completion of an obligatory research project chosen from

the entire range of medical fields, lasting at least twelve weeks, is recommended. The Council also accentuates interprofessional education; in future, healthcare processes will be increasingly organised in multi-professional teams, and thus based on division of labour. This approach makes cooperation with paramedical professions, including interprofessional education, more important. The Council recommends chairs of general medicine within each medical faculty, with adequate representation of primary medical care in the curriculum.

A prerequisite for adequate medical training is concentration of the mandatory parts of the degree course on a core curriculum, reducing medical examination content requiring agreement on an underlying, unified catalogue of learning objectives. In addition, the option of selecting individual areas of specialisation must be provided more consistently than before. From the European perspective, it has been shown that different degree programme designs can facilitate innovation in medical education. There is therefore no need for identical medical degree programmes across Europe. However, we need common quality standards/goals in basic medical education and a better exchange in best practice. It is also necessary to strengthen systematic networking of medical education research within Europe. The Council sees no remaining scope for abbreviating programmes to a period of less than six years (including the practical year), despite current European regulations allowing this.

The recommendations can be downloaded at:
http://www.wissenschaftsrat.de/en/home.html

Student action for quality in the European medical education – problems and challenges

Agostinho Moreira de Sousa

President-elect of the International Federation of Medical Students' Associations, Porto

At the moment, there are big changes happening in the field of medical education in Europe, such as opening of new medical schools and increase of "numerus clausus" all over Europe.

Students are aware of these challenges and they are assuming a more active stance in this area.

It is a challenge for students to be active on the field of medical education and it is needed a bigger focus on how students can actively participate in processes such as accreditation, as it happens in the United States of America and Canada. During the presentation, those benefits will be presented and also the problems that medical students are facing at the moment, when trying to assume a bigger leadership in these processes.

Deans

Medical education in Germany – a dean's perspective

Josef Pfeilschifter

Dean of the Faculty of Medicine, Goethe University, Frankfurt

Basic data about the structure of the medical education curriculum in Germany will be presented. A glance at the reforms of the last decade shows very clearly that the Medical Faculties are politically exposed to a permanent transformation process. In line with this attempts are increasingly being made to solve problems with healthcare by regulatory interventions in medical training. It is tried to make the Medical Faculties responsible for regional manpower disparities in the health system.

On the positive side, it should be noted that study of medicine and dentistry in Germany has been protected from the BA-/MA-system. If we look at the Bologna process we already left the specific aims of it behind us in German medical education. We are – so to say – in the post-Bologna-age.

The theme of this meeting is 'Evolution of Medical School Systems in Europe: Are we at Risk?' My answer from a dean's perspective is: Yes, we definitely are at risk in several ways.

We are suffering because the financial basis of the Medical Faculties for research and teaching shows a marked deterioration. Moreover, we have to put into practice politically motivated changes of the legal foundations of medical education coming from the national government as well as from the EU with its "Modernisation of the Professional Qualifications Directive" from last year.

Last not least we have every intention of objecting to the dubious recommendations of central agencies for science-based consultation. We have to make sure that the quality standards of medical education in Germany are not being undermined by models of educational franchising.

What is important is that we can be self-confident. The figures clearly show: The German medical schools are doing a remarkably good job.

Medical Schools in Georgia – present reality and development directions

Sergo Tabagari

Dean of the David Tvildiani Medical University, Tbilisi

Establishment of new medical schools creates unavoidable and unique opportunity to its founders and management to influence medical education system and practical developing of such medical professionals who will successfully deal with all functions of future doctors. In absence of clearly defined its own philosophical basis of medical education medical school will soon be transferred to routine performance of traditional activities. It should be mentioned that deviation from those principles causes medical education depression for several decades. In this regards, organisation of teaching process management and moreover its successful implementation is of great importance. In addition to the main question of the educational institution – what to teach, it is also important to define how to teach.

The mission of the AIETI Medical School is to provide scientifically-oriented Higher Medical Education based on the best international experience.

In ensuring the accomplishment of the mission we are guided by the following principles as to:

- continuously improve teaching, learning, research and management quality;
- implement the potential / resource of the academic staff and students;
- foster the establishment of optimal education and research environment;

- intensify the role of the Medical School in the field of medicine at national, regional and international levels;
- contribute to the formation of highly-educated society.

It is increasingly recognised that structured and regular curriculum renewal is an essential element of modern medical education, and therefore requires specialist academic educationalists and a specialised unit to lead on developing and embedding, requires modernising to more authentic competency-based learning styles with greater relevance to clinical practice. In this regard EU support opened significant opportunity to DTMU to modernise its system-based MD programme curriculum through implementation of PBL and case-based learning in it (modern trend in Medical Education). We are participants of EU-funded TEMPUS project "Establishment of the Supra-Regional Network of the National Centers in Medical Education, focused on PBL and Virtual Patient"(ePBLnet).

In epoch of globalisation one of essential arrangements is reformation of National System of Education and Science that will lead to united standard afterwards. Formation of united educational and scientific space in whole continent and / or in world scale is sufficiently difficult task. This integration process implies to work out united criteria with preservation of variety national system, orientation of training profiles, educational plans etc., which should be the themes for discussion in AMSE format for more deep cooperation in Higher Education.

Actual status of medical studies in Albania

Bajram Hysa

Head of the Health Management Department, Faculty of Public Health, Medical University of Tirana

The challenges presented today to the medical education are related to:

- the actual progress in the medical sciences,
- the higher needs of our population for qualitative healthcare, confronted to the limited disposable financial resources.

The core of the faculty academic development would be the transformation of the curriculum, according to the contemporary standards of the integrated model applied in the westerns countries. The improvement of the teaching methods in medicine is closely related with another aim of the direction of the faculties – the continuous education of the academic staff. The widespread use of telemedicine and closed – circuit medical procedures video monitoring as a demonstrative teaching tool for students and residents would increase the level of academic and practical skills education in the field of medicine. The research clinical skills teaching laboratories are an important part of the academic infrastructure of the medical education because of the practical skills aspect of the healthcare sciences.

Medical universities are principally an obsolete experience of Eastern Europe and Asia, under the conceptual model of technical-professional healthcare schools. A medical university would restrict and hinder the education and professional career of any member of the faculty doctor. The reason is because the Faculty of Medicine, the

Council of Professors, Senate and Rectorate would be composed virtually from the same individuals.

Medical Universities also require additional funding for the creation of new departments of Basic Sciences such as Chemistry, Physics, Biophysics and Biology. It is our firm belief that the times are mature for a multidisciplinary change that should take place in teaching, scientific and clinical research, clinical practice, academic freedom, financial autonomy and resource management of medical education.

Key words: Medical Education, telemedicine, Medical University, clinical skills

Medical education in Turkey – threats and opportunities

Iskender Sayek

Past Dean, Emeritus Professor, Hacettepe University School of Medicine, Ankara

Turkey is a country of 76 million inhabitants. The most current figures from Higher Educational Council reveals that there are 129,383 physicians of which 36,096 are primary care physicians, 72,405 specialists and 20,882 residents in specialty training.

The important milestone for modern medical education is 1827 when the first medical school was established in Istanbul by the Ottoman emperor. The first university reform was performed in 1933 and some German-Jew professors were invited to Turkey. Famous medical professors influenced the educational system significantly. The other important milestones in medical education are introduction of system based integrated curriculum in 1963 by Hacettepe University Medical School and problem-based curriculum in 1997 by Dokuz Eylül University Medical School. Currently there are 86 medical schools in Turkey which is above average when scaled to the national population in the world. The number of students admitted to the medical schools has increased significantly as well. There have been significant changes in health policies which have effected the medical education in Turkey within the last decade.

A small survey was done within the medical educators to determine the threats and opportunities related to medical education in Turkey. A questionnaire was sent to 60 medical educators and 35 responses were obtained (58% response). This small study

revealed that increased number of medical schools, increased number of medical students admitted to each program, the applied health policies, non-coordination between health policies and medical education and intervention of ministry of health to medical education are the most important threats. On the other hand institution of a national accreditation body, recognition of the national accreditation body by WFME, definition of national standards for undergraduate medical education, interest of the medical schools to accreditation and the will of medical schools for quality assurance were the most important opportunities reported. There were other factors as well brought up by the responders that will be further discussed.

In conclusion we can say that there are significant threats to medical education in Turkey but as well there significant opportunities which are mainly related to quality assurance which are in the process to improve the quality of medical education which ultimately will effect the quality of health care of the community.

Academic hospitals and regulatory authorities

What are academic hospitals for in 2014?

Ludwig Neyses

Vice-President for Research, University of Luxemburg

Background

A literature review shows that there is little data on the effect of teaching hospital size, research structure or clinician-teacher qualification (clinical, pedagogic) on the outcome of undergraduate medical studies. This presentation is therefore based on the author's 35 years' experience as a clinician-scientist in Switzerland, Germany, France, the US and the UK as well as experience from a long series of reviews of academic hospitals for international agencies and from the development of a 'feasibility study' for a Medical School in Luxembourg.

Focus of the talk

I will focus on the requirements for an academic hospital in terms of patient care, teaching and research as well as requisite qualifications for teaching positions and budget.

Conclusions

1. Clinical: It is possible to provide high-quality undergraduate teaching even in smaller academic hospitals that do not provide all medical facilities (e.g. heart transplantation, advanced neuro-surgery, etc.).

   However,

   1.1 the specialties that are being taught should be staffed with clinicians of the highest caliber (far more than the minimum required for a specialty diplo-

ma, at least as far as the senior clinician teachers are concerned, experience of several hospitals);

1.2.in general, several specialists in one discipline will be required (e.g. one diabetologist for both clinical and teaching is rarely acceptable);

1.3.the core teaching staff should have research experience (e.g. PhD or equivalent experience). Exceptions apply (e.g. in 'tropical diseases', third world experience might be more important).

2. Teaching: A course in medical pedagogy (including assessment of success) should be mandatory, likewise regular course evaluation by the students, potentially also external evaluation. Students need active exposure to research (at least 4 to 6 months, with thesis, with an active, ideally internationally competitive researcher in a group, not in isolation).
3. Research: A minimum of 30 to 40 professorial chairs appears necessary, at least 2/3 of whom should be active researchers. If the academic hospital claims to be a true 'research hospital' in the sense of international research, then the research-active professors and their groups should be either 'internationally competitive' or 'internationally leading'. The research should focus in one or a very few areas (i.e. not 'One professor for each medical specialty', unless the faculty the hospital is attached to is extremely large).
4. Structures:

4.1 Academic hospitals should ideally be led by academic physicians, obviously with special training in hospital management;

4.2 the university should contract teaching time directly with the teaching physician. This enables the university to check progress and to terminate contracts with underperforming teachers;

4.3 teaching and research should be separately incentivised and rewarded.

5. All other criteria for accreditation by the WFME should be fulfilled.

Cooperation of Medical Schools with other European universities – the German Medical Association's point of view

Frank Ulrich Montgomery

President of the German Medical Association, Berlin

Germany enjoys an outstanding international reputation for its healthcare. One of the reasons for this is the excellent standard of medical training, which is based on a long tradition and undergoes constant revision and development.

Over the years, Germany has repeatedly modernised the training standards for physicians in order to bring them into line with the most up-to-date medical and technological developments. The range of topics and the content of teaching and examinations set out in the Licensing Regulations for Physicians, which defines the structure and content of medical degrees across Germany, has been continually expanded over the past few decades. Alongside these developments, legislators have made changes to the Licensing Regulations for Physicians, particularly with the introduction of a model clause, which have enabled universities to depart from the conventional curriculum and set up model programmes in order to test out innovative new training concepts. Teaching has been improved, with more emphasis on problem-oriented learning, teaching in small groups and hands-on experience with early patient contact. In addition, the last major alteration to the Licensing Regulations for Physicians in 2012 strengthened the aspects of patient communication, family medical care and the subject of general medicine.

Whereas in Germany the subject matter of the medical curriculum has increased and the didactic requirements have intensified through the use of modern teaching and examination methods, the minimum period of training for medicine set out in the current version of the EU Professional Qualifications Directive was reduced from six to five years in January 2014. This, among other changes, has led to an increase in universities from other European countries cooperating with hospitals in Germany to set up so-called "medical schools" offering five-year "European" medical degree programmes. There is a high demand for places on these programmes which, in addition to the shortened duration of training, can mainly be put down to high competition in Germany for a limited number of university places in medicine. Since the beginning of the 1990s, the number of university places in medicine has decreased by 25% whereby the popularity of these courses has remained the same.

It remains to be seen to what extent the new European medical schools will be able to match the tried and tested standards of university medical courses in Germany in terms of teaching and research, as well as with regard to the quality of the teaching staff and other critical aspects. Only the retention of high standards of training can guarantee a high level of patient care and patient safety in the long term. Germany must also defend its reputation as a centre of excellence for medical training in the future.

Medical education – safeguarding standards, the UK experience

Niall Dickson

Chief Executive and Registrar of the General Medical Council, London

The expansion of the EU has made it nearly impossible for any country to completely manage its medical population, leading to new developments in the way medical education is delivered. In the UK, we are seeing a proliferation of 'private' medical schools that charge students a full fee and that do not draw on higher education funding authorities to support their courses.

The GMC has a vested interest in these developments. Medical education and training is a key feature of the GMC's main functions, as the GMC is responsible for regulating doctors from their time at medical school through postgraduate training and throughout their career to retirement. We set standards for undergraduate education, but schools have the freedom to direct and develop their own programmes. We quality assure these programmes to ensure they meet our standards, but do not articulate how they must be met. This said, we will take action if our standards are not met.

We believe that the GMC has to engage with universities wishing to explore opportunities in medical education, indeed our mandate dictates that we must. Whether expansion is regarded as undesirable is irrelevant – it is for other vested interests to explore the opportunities and constraints of our expanding healthcare economies. As the regulator, our priority remains setting and preserving standards, and ensuring that medical education in the UK continues to generate excellent medical professionals.

Accreditation and WHO-EU policy

Accreditation is essential – but will it guard us against questionable medical schools?

David Gordon

President-elect of the World Federation for Medical Education, Copenhagen

Some form of quality assurance process for every medical school is essential. The school may tell us, and its students, and potential future patients of those students when they graduate, that the school is providing a good medical education, but that assertion must be proved, and proved independently.

This is the reason for the World Federation for Medical Education (WFME) – WHO policy on Accreditation, "a commitment to improving the quality of medical education for better health care" and for the protection of society, and the reason for the indispensable WFME Recognition of Accreditation programme.

Quality assurance of medical education, in some form, has a history going back at least 2000 years, but modern systems established by law for control of medical schools began about 160 years ago. These first appeared in countries where medicine was poor-quality and uncontrolled. Quality assurance and accreditation processes are now best established where (arguably) they are least needed, in highly developed countries with generally excellent medical education.

Accreditation fails to protect us, and fails to prevent the operation of questionable medical schools, for a number of reasons.

A government may want to employ more doctors in its health care system, even though it has received expert advice that some of those doctors are of unacceptable standard.

Institutions that are not eligible for recognition as proper medical schools may nevertheless find their way onto lists of accredited schools, either by error, or by duplicity.
National governments may allow poor quality medical schools to operate, often by mistake, but sometimes deliberately.
These examples, and others, will be described.

Recognition of quality assurances across borders – perspectives for international specialised accreditation

Colin Tück

Director of the European Quality Assurance Register, Brussels

The Standards and Guidelines for Quality Assurance in the European Higher Education Area (European Standards and Guidelines, ESG) serve as the common framework for quality assurance and accreditation in the Bologna countries. The European qualifications frameworks (FQ-EHEA and EQF-LLL) complement the ESG with a common understanding of qualification levels based on learning outcomes. Since 2009, the European Quality Assurance Register for Higher Education (EQAR) lists external quality assurance agencies that have demonstrated their substantial compliance with the ESG. Despite these successful European initiatives, quality assurance remains largely national in the EHEA: countries have established their own systems of internal and external QA, built around the procedures and criteria that suit their national context.

While the ESG – as a common umbrella – facilitate the understanding and recognition of each other's QA results, such recognition is seldom straight-forward or even automatic, but more often than not decisions or agreements are made case-by-case.

More recently, EHEA countries have set out to go further, evidenced by ministers' commitments in their Bucharest Communiqué of 2012. They, for instance, allow their higher education institutions to be reviewed by a suitable foreign QA agency that is ESG-compliant and EQAR-registered. Other countries have decided to automatically

recognise qualifications from other EHEA countries, provided they have been quality-assured in accordance with the agreed framework, thus eliminating case-by-case decisions. Currently, a European Approach for Quality Assurance of Joint Programmes is being developed, allowing these programmes to be evaluated or accredited completely based on "European rules".

It appears that governments expect the Bologna tools to serve as a reliable and trustworthy framework with a direct impact on recognition, rather than being just a loose reference point with indirect consequences. This has an impact, for instance, on the revision of the ESG and the further development of EQAR.

For international, sectoral or specialised quality assurance and accreditation initiatives, these trends open new perspectives: while international and specialised accreditation used to be mostly parallel to mandatory evaluation or accreditation by a national agency, international and specialised QA agencies may incorporate the ESG in their work and can increasingly have their results recognised as part of national QA frameworks across the EHEA. This may contribute to making quality assurance more European and lead to more comparable standards, and eventually facilitate recognition of qualifications.

The presentation will address the current developments in quality assurance, such as the revision of the ESG, and what they might mean for international specialised accreditation.

WHO health policy updates – implications for medical education in the European region

Elke Jakubowski

WHO Regional Office for Europe, Copenhagen

Across the European Region, medical education systems are focused on diseases, diagnostic and curative care and medical doctors as the lead partner of patients. At the same time, we see more and more citizens and patients concerned about whether they will receive the appropriate care to restore and improve their health when in need. We in WHO observe that indeed in some parts of the European Region, health professionals are stretched thin. The recent global financial and economic crisis has led to substantial cuts on health sectors in many countries affecting access to care. At the same time, needs and demands for care increase progressively as people get older than ever before. Upgrading health promotion, disease prevention and working in multidisciplinary teams can be part of the solution. This requires new approaches to medical education.

According to the burden of disease studies of WHO, about 80 per cent of premature mortality such as through cardiovascular diseases, cancer, and injury is preventable. Between 50 and 75% of the decrease on the number of premature deaths from cardiovascular mortality in the last two decades is due to prevention. In comparison, medical treatment accounts for 25 to 50% of the reduced mortality.

A quarter of the European population is projected to be over the age of 65 in 2050. This will pose enormous challenges to health systems. Together with technological advances

it also has sizeable effects on health care costs and budgets: The OECD projects a doubling of health care costs within the next 35 years if the current cost trends are sustained. As a consequence, health services might become increasingly unaffordable to deprived populations.

The short and medium returns make a formidable economic case for promoting health and preventing diseases: Across the European Union (EU) the costs occurring to treat cardiovascular diseases and cancer each year amount to 170 billion and 125 billion Euros respectively. We could safe save 153 billion Euros across the EU only if we were able to effectively prevent road traffic injuries. Yet, in spite of this evidence, governments spend too little on preventing diseases: at best 5 per cent of their total expenditure on health care – representing only 3% of GDP spent on health care in the OECD on average.

WHO has adopted several policy updates in recent years to support countries in increasing efforts to prevent diseases. These include the new policy framework Health2020, the strategy to prevent and control non-communicable diseases, the European Action Pan on Public Health, and the food and nutrition action plan.

WHO policies also aim to inform medical education across Europe. In view of the growing burden of communicable diseases, the majority of which can be prevented, it is imperative now to improve health professional competences and capacities to promote health and prevent diseases. Education also needs to take account of options for task shifting between professions as well as working in multi-disciplinary teams and in community settings. We also need to do by far more to teach our professionals how they can enable and empower people in preventing and self-managing diseases. And we need to proactively engage with governments and third party payers to get them on board for investing in their populations' health through promotion and prevention.

Closing remarks

Peter Dieter

President of the Association of Medical Schools in Europe, Berlin

I want to thank all the speakers and the participants for coming to Berlin and their valuable contribution to this symposium. I think we had a very lively event with excellent presentations and fruitful discussions. I also appreciate the discussions with the pro and contra arguments that reflected the controversial opinions.

To my knowledge, this is the first symposium where different stakeholders came together to discuss the quality of medical education, medical schools and associated academic teaching hospitals in Europe. We had colleagues from the large field of education, regulatory authorities, accreditation agencies, WFME and WHO Europe.

Why do we need in Europe and worldwide a uniform quality standard and quality assurance system for medical education, medical schools and affiliated academic teaching hospitals?
I believe strongly that we will need this in the future:

- for the safety of patients, our children
- for the international mobility and the automatic recognition of medical licenses
- for transparency
- and for global recognition and accessibility of those standards.

Please allow me to tell you my three "take home messages" from this symposium:

1. There is an urgent need for a uniform quality standard and quality assurance system for medical education, medical schools and affiliated academic teaching hospitals in Europe and worldwide.

2. To achieve this, we need to seek contact with the EU policy in Brussels.
3. We can only achieve this goal if the different interest groups and stakeholders continue to stay in touch, communicate and audition together in Brussels.

Thanks again for coming and contributing to this symposium, and now I turn over to my colleague Josef Pfeilschifter.

I would like to thank all the speakers and all the participants for coming to Berlin and taking all the efforts to contribute to this symposium. In my opinion we had a very lively symposium with excellent presentations and fruitful discussions. I also appreciated the pro and contra that push the controversy enormously.

As far as I know, this is the first symposium in this vein where different stakeholder came together to discuss the quality of medical schools. We had persons here from the field of education, from the reculatory authorities, from accreditation bodies and so on. What I always do during a conference is making marks, and then I end up with three or four take home messages. If you agree I shall present you the following ones:

4. We have to get in contact with EU policy and politicians.
5. There is a need for EU-wide quality standards in medical education.
6. We have to find a better way to communicate with one another in order to learn from one another.

Thank you very much again! And now I hand over to Josef.

Josef Pfeilschifter

Board of the German MFT Medizinische Fakultätentag, Frankfurt

Dear Peter,

Dear Colleagues,

To make it very short: it was a pleasure for me to welcome you here in Berlin at the offices of the MFT. I learned a lot and I enjoyed the lively discussions. I learned the difference between AMSE and AMEE and the World Federation of Medical Education. And I think we should stick together, as what we have discussed, is very important. We have to organise our needs on a European level in order to be maybe that influential as we want to be.

I wish you all a safe trip home, hope that our cooperation will continue and increase, and you are always welcome here in Berlin.

Thank you very much!

Appendix

Berlin AMSE Consensus Paper
"Evolution of Medical School Systems cross Europe. Are we at a risk?"

The AMSE (Association of Medical Schools in Europe) 2014 conference, organised in collaboration with the German Medizinische Fakultätentag (MFT), was held in Berlin, Germany, September 13 – 14, 2014.

The background of the AMSE – MFT joint symposium was the "uncontrolled" increase of public and private medical schools, franchise-cross-border models of medical schools, differences in medical programmes, in quality assurance procedures and in the automatic recognition of physician licenses across Europe according to the EU Directive 2005/36/EC and EU Directive 2013/55/EU. Competent and well known speakers from different stakeholders such as medical education, deans of medical schools from different countries, academic hospitals and regulatory authorities, accreditation experts and WHO-Europe presented their data and ideas and more than 50 delegates from 18 different countries had stimulating and lively discussions.

The outputs of the meeting which were agreed by all participants were as follows:

- The study of medicine is an academic scientifically-based programme and medical schools and affiliated hospitals have to guarantee an appropriate academic scientific infrastructure.
- The development of technology especially communication technology, the economic crisis, integrative processes in Europe (European Union) and globalization in general inevitably influence medical education. Many new developments mark the evolution of the medical school now in the beginning of the 21st cen-

tury. Distance learning via the internet, 'e-learning', has become increasingly popular in recent years. It offers an opportunity to gain a qualification and experience a full university education while continuing in employment or other daytime responsibilities. However when it comes to practical medical training where is the limit?

- Internationalisation and mobility of medical students is becoming more and more intensive.
- Uncontrolled growth of medical schools, public and private, and franchise-cross-border models of medical schools, sometimes of doubtful quality, may erode standards and may damage health care. They may disrupt policy on the managed and good quality development of medical education and health care.
- All involved stakeholders should stay in closer touch in the future and improve their communication.
- We must build a closer collaboration with politicians and EU-policy.
- We need Europe-wide standards for medical education programmes, medical schools, franchise-cross-border models of medical schools and academic hospitals.
- Based on these standards we need Europe-wide valid quality assurance procedures.
- Recognition of physician licences should be based on these approved standards and adequate language, knowledge and skills tests.

AMSE must and will take a leading initiative in these proposed outputs in order to ensure that we are not at risk in the future.

Peter Dieter, AMSE President Berlin, 14 September 2014

Abstracts of participants

Transparency and quality assurance during curriculum development

Olaf Ahlers, Department for Curriculum Management, Charité – Universitätsmedizin Berlin

Background: Transparency and quality assurance represent two main aspects of curriculum development and its related accreditation processes. To meet the requirements of the increasing complexity and modular structures of all five undergraduate curricula, a web-based "Learning Opportunities, Objectives and Outcome Platform" (LOOOP) was developed and implemented at Charité – Universitätsmedizin Berlin since 2004. This platform is currently used for curriculum development including curriculum mapping and for communication of all timetables, competencies, objectives and assessment methods to students and teachers. In addition, it ensures patient- and teacher-availability already during curriculum development and allows the export of necessary reports for accreditation processes.

Aim of this study was to investigate usage behavior and acceptance of LOOOP as well as effects of usage on quality of lessons, on alignment of teaching / assessment and on assessment results.

Methods: Anonymized logfile and registration data were analyzed to get an overview over usage and acceptance of LOOOP. In addition, questionnaires were filled in by students and results of MCQ-tests were analyzed.

Results: Curriculum structure, usefulness of objectives, coordination of disciplines and MCQ-results improved significantly after implementation of LOOOP. About 3,000 members of faculty and 2000 students were registered in September 2014. About

85,000 lessons have been planned in 2014, number of LOOOP visits increased from 180,000 in 2011 to 380,000 in 2013 (visited pages in 2013: 5,500,000).

Conclusions and Perspectives: LOOOP is well accepted by curriculum developers, teachers and students at Charité and usage of LOOOP has a significant impact on quality of teaching and assessment. These data support the theses of increasing awareness that a web-based curriculum mapping is an effective tool to improve quality in medical education. Currently, cooperations with other Universities in Germany, the United States, Saudi Arabia and South Africa have been started to evaluate the usefulness of LOOOP for curriculum development in countries with different systems of undergraduate medical education.

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The feedback system as a tool to evaluate lecturers in the University of Pécs, Medical School

Balázs Ernyei, Ádám Schlégl, Attila Miseta, Zsuzsanna Füzesi, Medical School of the University of Pécs

Introduction: Although an increase in the number of Hungarian universities was perceived in the last decades this has not been accompanied by considering the students' demands and needs by all means. Many institutions have not yet realised that the 'brand' they have created is not only their property, but it is of their 'customers', the students, too. The students, like customers at the real market, want to shape the product, want their opinion to be heard, since they pay for the education either directly, or indirectly. Therefore it is very surprising that in the non-profit sector, only a low number of universities use the so-called „user-feedback" system.

The medical education represents a special place in the 'higher educational market'. Although medical schools have a stiff market in Hungary, there is a noticeable decreasing tendency in the number of applications of the Hungarian students. While in the 1960's the applicant/admitted ratio was 10:1, nowadays we can only measure a 2-3:1 ratio. Besides, more and more foreign speaking students (eg. English, German) are admitted to the universities who are more quality-sensitive concerning education compared to Hungarian students.

Aims: The aim of developing our system was to define a quality assurance method in the University of Pécs, Medical School that meets the requirements of the 21st century and produces valid results by measuring the satisfaction of the students. We have developed an online system with a motivational background that makes students interested in filling out the feedback questionnaires.

Methods: The questionnaires are filled out by the students of all four majors (general medicine, dentistry, pharmacy and medical biotechnology) in all three study languages (Hungarian, English, German) simultaneously. Prior to data collection students are informed about the purpose of the evaluation and confidentiality of the personal data. The questionnaires have a self-administration format. Sufficient time is provided for the participants to complete the questionnaires.
The introduction of the internet based evaluation raised the question of motivation. How can we motivate the students to fill in the questionnaires on the burden of their leisure time? Our solution is the following: students who give feedback on all their obligatory subjects till the deadline, get an administrative bonus that entitles them to register one day earlier for their exams.

Results: Currently, we are using the 6th generation of questionnaires which evaluates the student satisfaction up to a validity of 70%. According to our results, there is a statistically existing variable which can be defined as 'student satisfaction' in the medical education. The four different components used in our questionnaire cover this variable up to a 95% probability. The main dimensions are: the quality of the lectures, the quality of the practices, correctness of the course description and the exact description of the exam requirements.

There is an increasing tendency in the 'cooperation rate'. Out of 18 731 questionnaires in the first semester of the academic year 2013/14, 11,602 have been filled out (62%). This rate was 49% in the second semester of the academic year 2012/13. It is important to mention that both 62% and 49% were divided equally among all subjects, so the surveys give us general view of student satisfaction concerning medical education.
The questionnaires were available for 2,408 students, out of which 1,122 students (47%) could get the opportunity of the early exam registration.

A student motivation system to evaluate lecturers in the Medical Faculty of Pécs

Ádám Schlégl, Balázs Ernyey, Zsuzsanna Füzesi, Medical School of the University of Pécs

Introduction: As a provider, it is essential for the university to have valid educational quality assurance. The current law and ethical code does not allow in the EU to oblige the students to fill out the feedback questionnaires. The voluntary self-filling rate is low to administrate an appropiate quality assurance. It was inevitable to create a motivational system to increase the rate of filled out questionnaires.

Method: We have developed alternatives to motivate the students with the professional help of jurists, sociologists and educational organizers. Every option was acceptable by the Hungarian law and ethical norms. It was pretested which options were preferred by the students.

Results: Out of the alternatives, 70% of the students supported the possibility of earlier exam registration. It means that students who fill out evaluation questionnaires on obligatory subjects, will be awarded by the possibility of one day earlier registration for exams.

Discussion: 62% of the questionnaires (out of total of 18,731) have been filled out in the autumn semester 2013, that entitled 59% of the students for early exam registration. (These rates were 50% and 47% in the previous semester, respectively.) It is important that the filling out rates are equal among the subjects that supports the validity our analysis and gives us general view of the students satisfaction concerning medical education.

PBL implementation important issues: David Tvildiani Medical University (DTMU) experience

Nino Tabagari, SergoTabagari, Paata Tsagareishvili, David Tvildiani Medical University

DTMU performs MD program modernization by the support of partners within EC funded Tempus project "Establishment of the Supra-Regional Network of the National Centres in Medical Education, focused on PBL and Virtual Patients". Particularly, DTMU: (i) develops new model of curriculum and educational strategy, (ii) implements new themes of curriculum, (iii) implements new teaching situations, (iv) sets new aims and methods of teaching, (v) develops new assessment methods and (vi) establishes new structures for staff development (Medical Education Centre).

Designing of active teaching week needs comprehensive analysis, including process to provide systemic, through coverage of care content with PBL and overcome potential gaps in students' knowledge: (i) define content/objectives/outcomes of the particular teaching week; (ii) clarifying teaching and learning design and needed resources (human resources etc.); (iii) evaluate if the case needs changing or replacement;(iv) define if suggested cases are covering system or there is a need for changes; (v) define learning materials needed for each case, their logical sequencing and structuring to ease learning.

Significant aspect of the process is repurposing and modification of PBL cases (53 PBL cases provided to partner universities) and considers:

Case repurposing: 1) Applied to Georgian context: Geography, epidemiology, other issues of other county (England) calculated/directed to organizing the healthcare sector,

practice, ethics, values/mentality, sector regulation and other contextual issues; 2) Analyzed and directed to DTMU current and/or possible learning/teaching/educational resources (human resources, literature, materials including ambulatory/hospitalized (outpatient/inpatient) bases, with the possibility of including/integrating and using them as well as analyzing).

Case modification/adaptation: 1) cases modification based on Georgian reality: Clinical diagnosis and/or examination/investigation plans (diagnostic guidelines, markers etc), results of the laboratorial researches (population norm and etc), drugs/medications (groups/types of medications and/or names and etc for instance: Existing practice in "interpretation" of human norms and pathology related and other valuable/important issues. 2) Georgian interpretation ('Georgianizaiton') of (in the frame of) existence/non-existence of insurance service other related issues in a specific case. 3) Case modification DTMU directed to new programme and the focus of its teaching/learning modules.

Conclusion: PBL format enables contextualization of learning, though requires careful and well-planned development: (i) Logical design and sequencing of curriculum and learning materials, which means relevance of basic sciences to medical practice and not only of conceptual coherence of those sciences itself, (ii) Adaptation/modification/repurposing of PBL Cases at national context, also focusing on teaching modules of present/running program (and/or new program) and considering present human and material/technical resources.

The University of Pécs Medical School is an internationally recognised centre for medical, dental and pharmacological education in the Trans-Danubia region of Hungary

Zsuzsanna Varga, Attila Miseta, Medical School of the University of Pécs

The Faculty's motto

The Faculty's motto „chance favors the prepared mind" by Louis Pasteur duly indicates that we lay special emphasis on the quality of education. Well educated students are our best trademarks. We are pleased to say that in the past decade the number of our students rose considerably. We also take pride in attracting students from 64 countries of the world. We are convinced that our students, who are trained for one of the most beautiful and rewarding professions, can leave the university with a degree that is accepted and acknowledged in countries all over the world and guarantees excellent job prospects.

Mission statement

The University of Pécs Medical School's mission is to educate doctors and health care professionals of the highest standards who are efficiently utilizing their broad range of diagnostic, consultative communication and organizational competencies acquired during the years of the medical education. Our graduates are conscious of their social responsibilities and are devoted to expand their knowledge through lifelong learning and research as stable pillars for the provision of high-quality patient-centered care, and will positively engage with other professionals in advocating the needs and interests of patients and society.

Facts and Figures

Having been established in 1367 by King Louis the Great, our Alma Mater is one of the oldest universities in Central Europe. Besides the general medicine program in Hungarian, training in dentistry and pharmacy were launched in 1973 and in 2001. Meanwhile the English program in General Medicine was implemented in 1984. A similar German program was initiated in 2004. Dentistry and pharmacy programs were introduced in foreign languages as well.

Statistics

1. Number and qualification of the teachers of the University of Pécs Medical School

Major	Number of our teachers	PhD/CSc	DSc/MTA members
General Medicine (all programs)	785	290	34
Dentistry (all programs)	476	193	29
Pharmacy (all programs)	292	124	19

MTA: Magyar Tudományos Akadémia = Hungarian Academy of Sciences

2. The number of the students in each semester according to programs offered

	General Medicine			Dentistry			Pharmacy		Medical Biotechnology
	Hungarian	English	German	Hungarian	English	German	Hungarian	English	English
2008/ 2009. 1st semester	386	203	55	71	40	16	87	-	-
2008/ 2009. 2nd semester	381	188	49	71	35	16	86	-	-
2009/ 2010. 1st semester	492	267	93	96	53	23	116	-	-
2009/ 2010. 2nd semester	493	268	93	109	55	23	116	3	-
2010/ 2011. 1st semester	637	369	167	134	80	30	148	12	-
2010/ 2011. 2nd semester	638	369	168	135	82	31	148	12	-

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2011/ 2012. 1st semester	814	509	299	155	99	50	165	20	14
2011/ 2012. 2nd semester	817	507	300	158	99	50	168	20	14
2012/ 2013. 1st semester	929	652	477	176	134	52	189	53	20
2012/ 2013. 2nd semester	942	651	477	176	134	55	187	57	21
2013/ 2014. 1st semester	1063	796	663	200	168	72	227	82	25

The Medical School integrates 30 basic science and preclinical departments, and 21 clinical departments equipped with educational and research tools of the highest European standards. Besides these opportunities the Medical School offers the possibility for the students to practice the acquired knowledge in our newly established Medi Skills Lab, which is a dedicated instructional room with interactive models and simulators for training and gives an important help for self-study as well. Despite the rapid technical development and an ever-increasing degree of specialization, we still believe that medicine remains one of the most direct branches of sciences based on interpersonal relations including instructor-student and patient-physician interactions. With this principle in mind, our curriculum contains a number of obligatory practices in teaching hospitals. The practices can exclusively be carried out in accredited teaching departments of hospitals around the world.

Research

Although the primary purpose of the Medical School is to teach sciences and art of medicine, research is another important task. The scientific achievements of the Medical School are well recognized and have an international reputation. Students interested in pursuing a career in medical research are strongly encouraged to take part in our programs to collect experience in participating in clinical work, engaging in laboratory

activities. After all, we strive to attract our graduates to join our postgraduate, doctoral and medical specialization programs.

Summary

The University of Pécs, Medical School is a European centre of medical studies, research and regional health care. It is an intellectual centre, where research and everyday practice, education and patient care can mutually enhance efficiency. This explains our mission, which is to train highly-qualified professionals being able to bridge the gap between scientific research and everyday practice and proving successful and competitive on an international scale.

Participants

Olaf Ahlers, Head of Department for Curriculum Management, Charité – Universitätsmedizin, Berlin

Stefanie Busch, Head of Section Admission and Capacity Affairs, German Rectors' Conference, Bonn

Colette Creusy, Emeritus Professor, Faculty of Medicine, Lille Catholic University, Lille

Niall Dickson, Chief Executive and Registrar, General Medical Council, London

Peter Dieter, President, Association of Medical Schools in Europe, Berlin

Stijntje Dijk, Standing Committee on Medical Education Director, International Federation of Medical Students' Association, Rotterdam

Corinne Dölling, Project Officer, Association of Medical Schools in Europe, Berlin

Alice Edler, Coordinator, Munich Medical Research School, Munich

Bob Fonseca, Head of Paediatrics, St George Hospital, Sydney

Zsuzsanna Füzesi, Deputy Director of Behavioural Medicine, Medical School, University of Pécs, Pécs

Matthias Girndt, Vice-Dean of Studies and Teaching, Faculty of Medicine, Martin Luther University Halle-Wittenberg, Halle

David Gordon, President-elect, World Federation of Medical Education, Copenhagen

Klaus Grätz, Dean, Faculty of Medicine, Zurich University, Zurich

Michael Gruber, Federal Ministry of Science, Research and Economy, Vienna

Eckhart Hahn, Emeritus Professor, Faculty of Medicine Erlangen, Erlangen

Laura Hanske, Scientific Officer, Health Research, Project Management Agency – Part of the German Aerospace Center, Bonn

Hans Jochen Heinze, The German Council of Science and Humanities, Cologne

Volker Hildebrandt, General Secretary, German Medizinische Fakultätentag (MFT), Berlin

Marzellus Hofmann, Dean of Studies, Faculty of Health, Witten-Herdecke University, Witten

Bajram Hysa, Head of the Health Management Department, Faculty of Public Health, Medical University of Tirana, Tirana

Stephan Kolb, Business Development Director, Paracelsus Medizinische Privatuniversität, Nürnberg

Elke Jakubowski, WHO Regional Office for Europe, Copenhagen

Christoph Jermann, Asklepios Medical School Hamburg, Hamburg

Zdravko Lacković, PhD Programme Director, School of Medicine, University of Zagreb, Zagreb

Sam Leinster, Emeritus Professor, University of East Anglia, Norwich

Jessica Lichtenstein, Joint Head of Quality Education and Standards, General Medical Council, London

Ladislav Mirossay, Rector, Pavol Jozef Šafárik University, Košice

Frank Ulrich Montgomery, President, German Medical Association, Berlin

Agostinho Moreira de Sousa, President-elect, International Federation of Medical Students' Association, Porto

Ludwig Neyses, Vice-President for Research, University of Luxemburg, Luxemburg

Marcus Parry, Head of Medical Education Development Unit, Faculty of Medicine, University of Southampton, Southampton

Harm Peters, Head of Scheffner Center for Medical Education and Research, Charité – Universitätsmedizin, Berlin

Josef Pfeilschifter, Dean, Faculty of Medicine, Goethe University; Board Member, German Medizinische Fakultätentag (MFT), Frankfurt

Clare Polack, Programme Leader BM (EU), Faculty of Medicine, University of Southampton, Southampton

Lutz Retzlaff, Journalist, Marburger Bund Zeitung, Neuss

Eva Richter-Kuhlmann, Journalist, Deutsches Ärzteblatt, Berlin

Trudie Roberts, President, Association for Medical Education in Europe, Dundee

Iskender Sayek, Past Dean, Hacettepe University School of Medicine Ankara, Ankara

Ádám Schlégl, PhD student, Medical School, University of Pécs, Pécs

Tabea Schmidt-Ott, Bundesvertretung der Medizinstudierenden in Deutschland, Oldenburg

Gundula Schulze-Tanzil, Department of Trauma and Reconstructive Surgery, Charité – Universitätsmedizin, Berlin

Beatrix Schwörer, Head of Medicine Unit, German Council of Science and Humanities, Cologne

Werner Solbach, Institute of Medical Microbiology and Hygiene, Lübeck University, Lübeck

Dušan Šuput, Dean, Faculty of Medicine, University of Ljubljana, Ljubljana

Nino Tabagari, Head of Quality Assurance Department, David Tvildiani Medical University, Tblisi

Sergo Tabagari, Dean, AIETI Medical School, David Tvildiani Medical University, Tbilisi

Adel Tammam Eldin, AFCM, Cairo

Julian Thiel, Journalist, Zahnärztliche Mitteilungen, Berlin

Anja Timm, Senior Research Fellow in Education, Faculty of Medicine, University of Southampton, Southampton

Colin Tück, Director, European Quality Assurance Register, Brussels

Zsuzsanna Varga, Head of Dean's Office, Medical School, University of Pécs, Pécs

Jürgen Westermann, Dean of Studies and Teaching, Faculty of Medicine, Lübeck University, Lübeck

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