ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

Α.Δ.Ι.Π.

ΑΡΧΗ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΣΤΗΝ ΑΝΩΤΑΤΗ ΕΚΠΑΙΔΕΥΣΗ

HELLENIC REPUBLIC

H.Q.A.

HELLENIC QUALITY ASSURANCE AND ACCREDITATION AGENCY

EXTERNAL EVALUATION REPORT

School of Medicine

University of Patras

Co-financed by Greece and the European Union

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External Evaluation Committee

The Committee responsible for the External Evaluation of the **Medical School** of the University of **Patras** consisted of the following three (3) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005 :

1. **Professor Dr. Constantin Polychronakos,** McGill University, Departments of Pediatrics and Human Genetics, **President of the Committee**

2. **Professor Dr. George Iliakis**, University of Duisburg-Essen, Medical School, Institute of Medical Radiation Biology, Member of the Committee

3. **Associate Professor Thanos Tzounopoulos**, Departments of Otolaryngology and Neurobiology, University of Pittsburgh, USA, Member of the Committee

N.B. *The structure of the "Template" proposed for the External Evaluation Report mirrors the requirements of Law 3374/2005 and corresponds overall to the structure of the Internal Evaluation Report submitted by the Department.*

The length of text in each box is free. Questions included in each box are not exclusive nor should they always be answered separately; they are meant to provide a general outline of matters that should be addressed by the Committee when formulating its comments.

Introduction

I. The External Evaluation Procedure

- The External Evaluation Committee (EEC) gathered in Athens on Sunday November 17th and had its first meeting on Monday 9:00 am at the offices of the Hellenic Quality Assurance and Accreditation Agency (HQA). After a briefing by the HQA Director, Professor K. Oikonomou, the EEC traveled to Patras to initiate the Review process.
- The EEC arrived at the Medical School of the University of Patras (MS-UP) at Patras in the afternoon of Monday, 18th November and conducted its evaluation until the afternoon of Wednesday, 20th November, 2013. The members of the EEC had been provided with the Internal Evaluation report (Dec. 2011, covering the 2005-2011 Academic Year period, as well as the Academic Year 2011-2012; The Chairman of the internal evaluation committee explained to the EEC that as a result of the recent strikes by the administrative and technical personnel it was not possible to compile information for the evaluation of the 2012-2013 Academic Year) However, other documents of the MS-UP including a Studies Guide, which is distributed to prospective and active Medical Students, as well as the hand-outs of the scheduled presentations, were distributed to the EEC members. Additional documents and information that the EEC deemed necessary for the evaluation were requested at times, and were promptly provided; reference to this information will be made at appropriate places throughout this report. Many of the documents were provided prior to the visit and the EEC had the opportunity to consider them in the evaluation.
- On arrival at Patra, the EEC was received at the hotel by the Dean of the School of Health Science Prof. Dr. V. Kyriazopoulou, the Head of the MS-UP, Prof. P. Goumas and the Chairman of the Internal Evaluation Committee (OMEA), Prof. Dr. C. Stathopoulos. Prof. C. Stathopoulos oversaw the process of internal evaluation of the Medical School and was continuously available to the EEC throughout its visit at Patras.
- During the visit, the EEC met with members of the OMEA; members of the Faculty; undergraduate, Master's and Doctoral Degree students; residents in clinical training in several specialties (including surgery, medicine, general practice, obstetrics and gynaecology, anaesthesia and others); research, technical and administrative staff at the MS-UP and the University Hospital. The EEC as a whole or in smaller teams also visited multiple clinical units, basic sciences departments and their laboratories and other facilities at the University and the Hospital, including: the Departments of Anatomy, Biochemistry, Biology, Physiology, Pharmacology, Medical Physics, Hygiene, Microbiology, Pathology, Internal Medicine, General Surgery, Paediatrics, Cardiology, Obstetrics and Gynecology, Radiology, Neurology, ENT, Ophthalmology, Orthopaedics, Rheumatology, Biomechanics, the Pediatric Intensive Care Unit and central facilities like the Animal Facility.

- More specifically the itinerary of the evaluation was as follows:
- On Monday 18th November the EEC attended a very informative presentation session at the office of the Rector. During this Session Professor George Panagiotakis, Rector of the University of Patras presented an overview of the goals of the University as a whole. This outline was further elaborated in depth by a presentation from the Deputy-Rector and was finally focused to the structure and the Medical School by the Dean of School of Health Sciences Prof. Dr. V. Kyriazopoulou.
- The above meeting was immediately followed by a Meeting at the University Hospital Auditorium in the presence of the entire Faculty of the Medical School. During this meeting the committee was given an overview of the School by its Head, Prof. P. Goumas. The undergraduate Curriculum was presented by the Deputy Rector of the UP, Prof. Dr. C. Gogos, and the Resident Training was presented by the Dean of the School, Prof. V. Kyriazopoulou. The Postgraduate Programs on "Applications in Basic Medical Science, "Informatics for Life Science, Medical Physics, and Biomedical Technology, were presented by Prof. Dr. D. Drainas, Prof. Dr. Z. Lygerou, Prof. Dr. G. Nikiforidis, and Prof. Dr. G. Palikarakis, respectively. The Doctorate Program in Clinical Studies was presented by Prof. Dr. D. Kardamakis. The presentations were informative and provided to the EEC a rather complete picture of the extensive activities of the MS-UP at the postgraduate level. The Research activities of the School were presented by the Prof. Dr. Z. Lygerou, and initiatives and collaboration with social and cultural production organizations by Prof. Dr. D. Dougenis. The activities of the School in the ERASMUS exchange program were presented by Prof. Dr. C. Flordellis, while students of the University presented activities in HELMSIC and the EEFIE Societies. Finally, the committee was made aware of extensive activities of the School in Safety and Hygiene, as well as in Quality Assurance procedures.
- On Tuesday 19th November the EEC decided to form three units in an effort to accommodate the overambitious Review Schedule of the individual Departments prepared by the OMEA. Prof. Polychrnonakos carried out site visits to clinical Departments, whereas Professors Iliakis and Tzounopoulos focused on Basic Departments and the basic research activities. Originally scheduled central Auditorium presentations were eliminated. These site visits that included participation of the majority of the Department members allowed the EEC to generate a first-hand impression of the activities of the MS-UP and are at the heart of the present evaluation.
- The same day, EEC requested separate meetings with the students that took place in the absence of Faculty. In particular, members of the EEC met with:
- a) A sizeable group of postgraduate and doctorate Students.
- b) A sizeable group of undergraduate Students and residents.
- On Wednesday, 21th November the EEC met with members of the support, technical and administrative staff of IDAX, EEDIP and ETEP. A meeting was also organized with a group of Emeriti Professors who had played a central role in the formation and development of the MS-UP since its inception in 1977. In addition the EEC visited several facilities of the University Campus including the Animal Facility, the Library, the Conference Centre, and the Sport Facilities.
- The evaluation ended with a briefing on first impressions by EEC to the leadership of the Medical School and subsequently to the Rector of the University with representation of the Medical School, OMEA and MODIP.

- All above meetings were serious, open, honest and direct and were generally very well attended. The entire faculty of the Medical School was eager to participate and present achievements or formulate problems and wishes for further developments. All participants were prompt in providing information and input on central issues arising during the evaluation process. In general, the EEC feels that the external evaluation was very well organised and that the leadership and faculty of MS-UP did their best to facilitate the entire process. It was felt that most faculty members fully endorsed the significance and need for external evaluation; in fact they were excited about showcasing their achievements. This is regarded by EEC as an indication of openness and of desire for improvement and the thriving of excellence. Only a relatively small group of undergraduate students appeared negative and highly suspicious regarding the ultimate purpose of such evaluations. The presentations to EEC were outstanding with an obvious desire to formulate problems and the determination to make significant improvements.
- During the evaluation, the EEC saw evidence of multiple areas of excellence for which congratulations are due. It also identified areas where improvements are needed and at times required. Due to the space constraints, report focuses more on problem areas. This by no means should detract from the considerable achievements made in several areas. Even the coincidence of the evaluation with a long-term strike of the administrative personnel and its flawless organization are commendable and worth-mentioning. The report emphasizes issues that apply across the board and affect several of the School's activities. Only in selected cases individual Departments and Laboratories are mentioned and recommendations are made. Some important issues raised in this report are systemic and are caused by factors operating at the national level, beyond the control of the MS-UP and its leadership. They are mentioned because they are of crucial importance in the solution of many of the associated problems in the hope that, in due time, steps may be centrally undertaken to resolve them.
- The EEC expresses its gratitude to the Dean of the School of Health Sciences of the UP, Prof. V. Kyriazopoulou, the Head of the MS-UP Professor P. Goumas, and the Associate Professor C. Stathopoulos and all other members of OMEA for putting together documents and presentations and for organizing an efficient site visit.
- The EEC found the internal evaluation reports and associated relevant documentation very informative and essential for understanding the functions and components of the School. However, there are areas where data quality and interpretation can be improved: examples are provided in this report. In addition, it should be emphasized that the process of evaluation is continuous and iterative and there should be steady effort to improve. Periodic checks should be implemented and checkpoints should be applied to different levels of organization of the Medical School as indicated in different places throughout this review.

A. Curriculum

To be filled separately for each undergraduate, graduate and doctoral programme.

APPROACH

- What are the goals and objectives of the Curriculum? What is the plan for achieving them?

The stated objective is to provide "Medical education, which leverages modern advances of basic sciences of medicine, biomedical technology, preventive Diagnostics and therapeutic medical practice".

To achieve this and harmonise with EU standards, The program has adopted (or planning to adopt) modern approaches that include a central core of basic biomedical sciences, early exposure to clinical skills, small group tutorials, program- and task- based learning (PBL and TBL), integrated teaching of organ systems, objective structured clinical examination (OSCE), and training in bioethics.

Regarding the postgraduate studies there are four different programs: Applications of Basic Medical Sciences, directed by Dr. Drainas; Informatics for Life Sciences, directed by Dr. Lygerou; Medical Physics, directed by Dr. Nikiforidis; Biomedical Engineering directed by Dr. Pallikarakis. While there are some differences among the programs the overall goal is to advance higher education in the interdisciplinary field of Life Sciences. Graduates are expected to acquire knowledge and skills required for a career in academia or industry in this rapidly evolving hybrid field

- How were the objectives decided? Which factors were taken into account? Were they set against appropriate standards? Did the unit consult other stakeholders?

This "new" curriculum was established since 2003-2004, funded by the 2nd Community Support Framework, driven by Prof. D. Bonikos, professor of pathology, with the contribution of the project implementation team (Profs. Vagenakis, Dimitrakopoulos, Kalfarentzos and Gogos). It aspires to modern European standards. In establishing the "new" curriculum the team held broad consultations with other faculty, students and the community.

Regarding the postgraduate programs, the programs are performing regular (at least every two years) revisions of curriculum to adjust to the rapidly evolving field of Life sciences. Through evaluation sheets, distributed to and filled in by both students and teachers, critical parameters of the education process are evaluated, in order to ensure that educational objectives are achieved.

- Is the curriculum consistent with the objectives of the Curriculum and the requirements of the society?

Yes

- How was the curriculum decided? Were all constituents of the Department, including students and other stakeholders, consulted ?

The curriculum was decided after taking into consideration the curricula of European Medical Schools, which incorporated modern teaching methods in their curricula (McMaster, Dundee, e.t.c.) There was broad discussion among faculty and student

representatives, which included pilot presentations to, as well as discussion and debate among faculty and students

- Has the unit set a procedure for the revision of the curriculum?

The curriculum is updated yearly by the General Assembly of the Faculty following suggestions of the Curriculum Committee. The representatives of the students and the medical faculty participated in the process. The curriculum is revised by taking into account student evaluations of previous years, which are administered and recorded systematically. In addition, there is an educational committee that oversees implementation and makes suggestions for future changes.

Regarding the postgraduate programs, please see response to Approach

IMPLEMENTATION

- How effectively is the Department's goal implemented by the curriculum?

Most of the provisions of the curriculum are in place; however some provisions are under development. Specifically, OSCE (objective structured clinical examination) does not appear to have been implemented as yet. The curriculum relies heavily on small-group teaching, which puts strain on the faculty's human resources (detailed below).

- How does the curriculum compare with appropriate, universally accepted standards for the specific area of study?

The committee was impressed with the objectives of the curriculum, which incorporates many of the modern elements of medical education, such as the early introduction to clinical skills, integration of teaching on organ systems, OSCE and a stress on bioethics.

- Is the structure of the curriculum rational and clearly articulated?

Yes.

- Is the curriculum coherent and functional?

Yes, in general, but there are aspects that could be improved. For example, the description of "integrated" teaching in the 6th and 7th semesters still "reads" like a list of separate organ systems -- the mechanism for achieving integration remains unclear. Approaches to the PBL (problem-based learning) are clearly described, but it is not clear where in the curriculum TBL (task-based learning) belongs or how it is implemented.

- Is the material for each course appropriate and the time offered sufficient?

Much textbook material is available on-line for the students and the detailed study guides provide additional suggested reading. The question of full-text access by the students to this material is often a problem, as discussed elsewhere.

- Does the Department have the necessary resources and appropriately qualified and trained staff to implement the curriculum?

Clinical teaching presupposes a well-equipped health-care facility serving sufficient population. The university hospital is the main tertiary-care referral centre for Western Greece below Arta and much of the Peloponese, a population of 1.2-1.5 million. Over 4,000 hospital admissions per year and almost 200,000 outpatient visits or day-hospital stays per year guarantee adequate exposure to a sufficient number and wide range of pathologies. Some of the clinical services have prominence at the national level (e.g. bone marrow transplantation, bariatric surgery, face-and-neck surgery) while others are sub-optimal (e.g. the cardiac component of cardiovascular surgery, a problem mostly for the training of residents). The Center performs an adequate number of kidney transplants but no liver or

heart.

RESULTS

- How well is the implementation achieving the Department's predefined goals and objectives?

Most of the general objectives of the curriculum have been implemented, with varying degrees of success. The early introduction of clinical skills appears to have been well accepted and on-going, with some questions about the maturity of the students. The integrated teaching has been implemented but with reservations on the part of the students interviewed by the committee (some complaints about heavy course load). The OSCE is still under development and has not been tried. Student exposure to bioethics and biostatistics appears adequate.

Another problem is that students are permitted to continue the curriculum even if they have not passed examinations of previous courses. This is a serious problem as the material of many of these courses is a prerequisite for meaningful teaching of the subsequent courses. This is a chronic aberration of the Greek system at the national level that must be corrected. Faculty members expressed fear of student opposition and turmoil. We consider this a very poor (no) excuse for perpetuating this irrational practice.

Regarding the postgraduate program, the committee was impressed by the enthusiasm and the commitment of the graduate students. It is admirable that most of these students work 10-14 hours per day without, in most cases, getting paid. However, from interviews with graduate students we noticed that successful implementation of a few modifications/additions could further increase the training potential of the graduate program of Medical School of Patras. From private interviews with the students the committee noted that the check-point for candidacy to PhD is not optimal. For Ph.D. candidates who are Medical School graduates, Selection is based on Medical School examination grades (particularly those relevant to their choice of the area of research) and the records of their conduct during their studies, but such information is not always available for candidates from other Medical Schools of the country. A personal interview also takes place with the members of the PhD Selection Committee which ultimately decides whether the candidate satisfies the School PhD Program standards. It is strongly recommended that ambitious candidates be made aware of the research prerequisites of their research projects, usually after discussing them with the relevant faculty, and that they are willing and ready to satisfy the needs of such an endeavour. In all Basic Sciences PhDs successful passing of a Qualification Examination that takes place after Master Degree and before acceptance to the PhD Program is required

- If not, why is it so? How is this problem dealt with?

From information in the study guide, the Integrated Teaching does not appear truly integrated, as it is still listed as a non-overlapping series of body-system headings in the teaching schedule. We are assured that the connection is made by collaboration between clinical and preclinical faculty and frequent revisions are made based on student feedback. The OSCE, a widely accepted methodology of clinical teaching has not yet been started. Despite the dedication (to the point of self-sacrifice) by some of the faculty members, limited teaching personnel appears to be the main problem. This appears to be beyond the control of the university (largely reflecting the results of the hiring freeze for junior faculty).

- Does the Department understand why and how it achieved or failed to achieve these results?

There seems to be awareness of the problems but the solution (more teaching staff or fewer students) is beyond the control of the Department.

IMPROVEMENT

- Does the Department know how the Curriculum should be improved?

  They are aware of the importance of OSCE in order to improve teaching. The committee holds regular monthly and ad hoc meetings with a predefined agenda and strives to detect and remedy deficiencies in the implementation of TBL

- Which improvements does the Department plan to introduce?

Implement OSCE. Keep requesting a smaller number of admissions.

We propose that the committee reinstitute the post-graduate studies curriculum which, we are told, had been suspended because of cuts in funding. We urge the Greek authorites to reconsider this cut. We also propose the introduction of a check-point for candidacy to PhD where students in which they are thoroughly tested for their ability to prepare, present and defend in front of a committee a grant proposal. This should become a real check-point, but most importantly this should become a training opportunity for students to develop independent and critical thinking.

The success of a graduate program is largely judged by the quantity and quality of the publications of the students and by the academic/professional development of the students after they graduate from the program. As during our visit we were not provided with this important data, we recommend that graduate programs gather, quantify and analyze such indicators on a routine basis. This practice will also allow the objective evaluation of the programs internally; a comparison among them may facilitate development of plans for future improvements. It should be noted that during the site visit the committee was orally assured that the professional success of the graduates of some of the programs was very high with the vast majority finding jobs or continuing their studies immediately after graduation. Documentation of this success including names of students and positions they entered upon graduation would have facilitated the present evaluation.

General Comment: The committee was impressed by the hospitality, the openness and the flexibility of the faculty and students towards the evaluation process. Faculty was clearly proud of their achievements and eager to showcase them. For example, multiple changes in the program in response to the last-minute requests of the external evaluation committee were promptly and efficiently arranged. However, a general procedural – and conceptual, in our opinion – problem has been the lack of internal advanced processing of the written information that was provided as a basis for the evaluation. The committee felt bombarded with hundreds of pages of information – in several cases highly repetitive – with minimal conceptual organization of the content. As a result, processing and digestion of content by the committee were significantly delayed and generated the risk of jeopardizing an in-depth analysis. While we understand that the organization of the material may have been shaped based on the requirements of ADIP, we encourage faculty to process conceptually the data prior to presenting them to the external committee.

B. Teaching

APPROACH:

Does the Department have a defined pedagogic policy with regard to teaching approach and

methodology?

Please comment on :

- Teaching methods used

The new curriculum, implemented over the past 10 years, has moved the emphasis from classroom teaching to small groups, interactive teaching and the more direct implication of students in the management of clinical cases. This was a long-overdue step towards compliance with accepted European norms. The concept of "acting intern" brings the student closer to the actual carrying out of health care but it should be better documented. Ideally, students and residents should keep a log of the type of cases they are seeing and the extent of their involvement. Paediatrics has such a log for residents. Wider implementation for students from all Departments should be considered.

Most clinical divisions report satisfactory numbers of seminars, small group teaching sessions, journal clubs and other such training activities. In most of these activities, the students are mostly passive participants (audience). Within some rotations, students have been asked to present journal club or topic reviews but this appears to be the exception rather than the rule. More efforts to involve students as active participants should be a high priority for most of the clinical divisions.

For resident teaching, some clinical services (e.g. Paediatrics) have very specific and detailed training goals of knowledge and skills to be acquired. Others (e.g. Dermatology) list broad categories, and others have only the very basic principles. There needs to be a more systematic cataloguing of what needs to be achieved during specialty training.

- Teaching staff/ student ratio

The number of teaching personnel is the most serious problem, especially with the emphasis on small group teaching. Through a combination of departures and hiring freeze, numbers have been declining, especially at the more junior level (the inverted pyramid problem). This is compounded by the problem of a disproportionately large number of students. The school estimates 80 medical students as the optimal number but is obliged, by decision of the government, to accept more than twice as many. The excess is made partly of students succeeding in the entrance exams and partly of individuals entering medical school in non-competitive ways (e.g. lower admission standards for Greeks of the diaspora, or those with health problems). The latter practice compounds the problem by adding students with questionable qualifications. In general the high number of students generates logistic problems of the operation of the medical school and certainly undermines teaching quality. It also generates problems of employment for many of the students after completing their studies. The solutions many students resort to, such as moving abroad, leads to the bizarre situation of our free educational system training the Physicians that serve other countries. The number of students the School requests (80-100) per year is reasonable and should be implemented. The ratio of faculty to students (4.8 at present) should be improved.

- Teacher/student collaboration

To the extent that it could be witnessed from touring the wards and clinics, including the interviewing of many students in the absence of their supervisors, student-staff relationship is characterised by mutual trust and respect. Teaching staff is approachable and receptive to student's concerns. This is commendable and needs to be fostered and strengthened to optimize learning and improve thus further the quality of the Medical School. The concept of tutor that the Medical School is trying to introduce is considered to be very good. However, the unfavorable student/teacher ratio will generate implementation challenges to the faculty

that will require a high degree of inventiveness and dedication to overcome.

- Adequacy of means and resources

As described above, health-care based resources are adequate. Access to full-text journals and textbooks was presented to us by the students as a problem. Funding shortages have resulted in limiting access to important journals. The committee urges the relevant Greek authorities to make the funding of journal access a high priority. Textbooks are provided free of charge by the National Program Evdoxos.

- Use of information technologies

Patient record-keeping is all on paper. Laboratory results are available electronically but access of students to computer terminals on the wards and clinics, where bed-side teaching is actually conducted should be improved. Imaging is available on both film and CD ROM and is expected to be available on-line soon (with the same caveat about availability of terminals on-site, where patient care occurs. The central library of the University has a top of the line system of computers that could also be used by the medical students, in a facility setting that exceeds average international standards. Yet, chronic underfunding limits at the moment the available content.

- Examination system

Preclinical exams are mostly by MCQ plus short assay-type questions. Examinations at the clinical level are mostly oral. Bedside examination on actual patients is part of the on-going assessment of the students in their daily training but it should be more formally incorporated into exams. Implementation of OSCE will greatly facilitate this.

The committee recommends that student evaluation on the day-to-day execution of their duties be done in a more structured way. Exams alone evaluate mostly knowledge, but are not sufficient to evaluate the other two critical components of medical training: clinical skills and attitude towards the patient and the teacher. We were assured that at the end of each clinical rotation, a clinical performance score in each discipline is assigned to the student and that this score is taken into account in formulating their final score after the oral examination in the clinical discipline in order to graduate. We recommend that this be performed in a more structured way, using precise forms, such as provided by the CanMeds system or something comparable

While this is desirable for undergraduate students, it should be absolutely mandatory for residents. Residents enter training programs with no evaluation of their knowledge, skill or personality; time on the waiting list is the only criterion and absolutely no faculty selection! Residents are only evaluated at the end of their residency, with no possibility of re-directing underperforming trainees. This is a totally unacceptable system that is not following the educational standards internationally and requires urgent adaptation. Although the issue is not at the purview of the Committee, the recommendation is made to accept residents on merit rather than on the basis of their position on a waiting list. The Medical School of Patras is particularly well suited for training residents as it provides training arising from a large number of cases covering large spectrum of diseases. This training potential needs to be exploited to the full. Importantly, algorithms for resident selection need to be established by the State with input from the Faculties of the Medical School. Finally, periodic evaluation of residents, using a grading form, as performed by some departments (e.g. Paediatrics), should be adopted by all clinical services as a means of feedback and self–improvement.

RESULTS

Please comment on:

- Efficacy of teaching.

Efficacy of teaching with meaningful metrics is difficult to determine. One criterion, easy to obtain, is student evaluations. These are systematically administered; this mechanisms is well accepted by the students and overall quite positive. However, student evaluations reveal only part of the answer and exclusive reliance on them risks making a popularity contest out of teaching activities. The ultimate criterion should be the long-term professional outcome of the trainees. Success in obtaining competitive residency positions is a very good metric for undergraduate program quality but, unfortunately, it cannot be applied to residency within Greece because of the incomprehensible, irrational, punitive and unfair system of waiting-list entry into training programmes. Success in foreign postings (e.g. in the USMLE) is mentioned but no statistics are given. A more systematic follow-up and recording of the professional success of graduates is recommended.

- Discrepancies in the success/failure percentage between courses and how they are justified.

Such discrepancies will inevitably occur, even in the best teaching environments. The Educational committee is monitoring such matters and there is evidence of attempts to minimize them.

- Differences between students in (a) the time to graduation, and (b) final degree grades.

There is a very serious discrepancy in graduation times. In addition to the 776 students who are in the normal flow of the six-year programme, there are 31 students "Επί πτυχίω" (we interpret this as meaning that they are within a year of the time they ought to have graduated) and, much more alarmingly, 213 longer than a year past their graduation.

- Whether the Department understands the reasons of such positive or negative results?

It is clear that this graduation-time discrepancy is the result of the lax system that has permitted "perpetual students". It is possible that the new law that prohibits the maintenance of perpetual students, now in effect, will purge such cases from the system. Otherwise, the Medical School should take measures to minimize them.

IMPROVEMENT

- Does the Department propose methods and ways for improvement?
- What initiatives does it take in this direction?

The MS-UP is eager to have this problem – a result of the law governing university education in Greece– resolved. It is hoped that the recent change in the law will assist towards remedying this aberration. The problem will be solved by the EE-imposed obligation to graduate within two years of the end of the normal curriculum. Although this is still a long period of grace, it will greatly diminish the magnitude of the problem.

The committee noticed that there is a resistance in allowing the writing of thesis in English. While we understand the need for maintaining the usage of Greek scientific language, we believe that writing the thesis in English is an extroverted approach to the communication of scientific knowledge, as well as a unique training opportunity for the student. Thus, we propose that teaching should be performed in Greek to maintain the language, with the option to write the dissertations in Greek or English offered to the candidate. This will help attract foreign students and Greeks of the diaspora as well. The law allowing submission of theses written in English is recent and the faculty assures us that they intend to implement

this aspect.

C. Research

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

APPROACH

- What is the Department's policy and main objective in research?
  The policies are driven by the priorities of the various disciplines within MS-UP but it is clear and at times impressive that research is a main priority in the Medical School of Patras.

- Has the Department set internal standards for assessing research?

  It is not clear that the school/department has set clear standards for assessing research (please see improvement for more details). However, in several of the presentations made to the committee metrics like publication record, impact factors of published papers, H-Index and external funding were mentioned and analysed.

IMPLEMENTATION

- How does the Department promote and support research?

Despite the major economic problems due to the financial crisis in Greece, The School supports research significantly. For funding support to junior PIs there is the Program K. Karatheodori (2009-2012:6 Grants to Medical School Faculty; 2010-2013:10 Grants to Medical School Faculty; 2013-evaluation ongoing).
For fostering co-operation between University members and facilitating networking outside the University and links with industry the school has developed 12 Networks coordinated by Medical School Faculty.
Moreover the School provides Infrastructure Support (Animal House, Central Research Facilities, see Quality and adequacy of research infrastructure and support for details).
Finally, the school provides Technology Transfer Patents and seed for Spin-offs

- Quality and adequacy of research infrastructure and support.

  The research is infrastructure is strong with state of the art facilities such as Advanced Imaging Facility (Leica SP5, Live cell imaging, FRET, FRAP, localized damage); Microarray Analysis (Perkin-Elmer Scanner, HybArray 12); Bioanalyzer (Agilent); RealTime PCR (Lightcycler 2.0); well-organized and maintained Animal House. Moreover, the space was adequate and well maintained.

- Scientific publications.
  See next section (results)
- Research projects.
  "Research projects are set by the priorities of the faculty of the various disciplines of the Medical School" The School is currently active in both Basic and Clinical Research, as evidenced for example by the number of competitive national and international external grants which fund Basic Research projects in both Preclinical and Clinical Units (approximately 150) and the number of ongoing clinical trials (approximately 200). The School has set a clear objective to further enhance collaboration between basic and clinical science research endeavours in the School and move towards

integrated translational medicine research projects in the future. To that end, it is hoped that the School will be able to implement an internal funding initiative for translational medicine projects carried out by collaboration of basic and clinical research units (currently under development) and to attract external funding for these endeavours

- Research collaborations.

For fostering co-operation between University members and facilitating networking outside the University and links with industry the school has developed 12 Networks coordinated by Medical School Faculty. The interaction plan with Johns Hopkins University in the USA should be praised. Collaboration with the Department of Hellenic Studies at Harvard University should also be mentioned and praised.

RESULTS

- How successfully were the Department's research objectives implemented?
  The committee was absolutely impressed by pockets of excellence in research quality and in ability to secure extramural research support (for example, the group of Dr. Lygerou: h factor: 22; two ERC grants to Dr Z. Lygerou and Dr. G. Stathopoulos, MD). It is truly astonishing to observe this momentum in research, especially during times of severe economic recession.
- Scientific publications.
  The Medical school of Patras is prolific. However, despite some amazing exceptions the quality of the publications is mediocre as evidenced by the low impact factor of the journals that they are published and by the lack of citations. This said, the committee noted a clear upward trend in improved impact of published work. The average number of citations per faculty member was over 80 in 2013. In our discussions, the School faculty recognised the need to further promote scientific output and to encourage quality versus quantity.

- Research projects.
  See answer to this question in Section C.

- Research collaborations.
  The Medical School of Patras is a highly collaborative place as indicated by multiple internal as well as international collaborations

- Efficacy of research work. Applied results. Patents etc.
  There is evidence of knowledge translation related to clinical research at the University Hospital, including society initiatives such as the Bone Marrow Transplantation registry and the Rehabilitation Center. There are a number of applied projects offering external services at the regional and national level

- Is the Department's research acknowledged and visible outside the Department? Rewards and awards.

The School's standard for research has set as a prerequisite that scientific articles produced in the context of PhD Theses and/or grants are published in journals which are included in Medline (PubMed). This is a minimum standard and the committed strongly recommends that the journal impact factor be close to or exceeds the current median impact factor of the

journals of the relevant discipline, as published each year by the ISI database. Members of the Medical School have been awarded with 2 ERC grants (Consolidator and Starting) and awards by international committees such as the European Molecular Biology Organization (one EMBO Young Investigator Award). Members of faculty hold Honorary Doctorates at Universities abroad

IMPROVEMENT

- Improvements in research proposed by the Department, if necessary.

  As a means of encouragement in seeking excellence and active participation in competing for extramural support for research projects, we suggest that the School of Medicine develops guidelines for recognizing excellence and for providing an incentive plan for successful faculty members in the School of Medicine. For example, implemented initiatives may permit principal investigators who have been successful in securing external grants or contracts, within well-defined limits, a choice between a salary supplement, or the award of research incentive funds.

  In many departments, we observed a "reverse pyramid" shape in the composition of faculty (too many Professors and Associate Professors, but fewer Assistant Professors). While we understand that this reverse relationship is due to the lack of state funding for the hiring of junior faculty, this is an important issue that is expected to impact the future of the School. Thus, we highly recommend that the University develop a well thought-out strategy to be presented to the Ministry of Education for implementation.

- Initiatives in this direction undertaken by the Department.

During the first day presentations, as well during the summary sessions on Wednesday it was evident to the Committee that the Faculty is acutely aware of the problem. Repeated appeals to the Ministry were mentioned to unfreeze the filling of vacant positions and allow the hiring of young individuals who have already been approved by the search committee of the department (in some cases even 2-3 years ago). Unfortunately, the overall financial condition of the country imposes serious restrictions to such expenses. The Committee would like to emphasize that unless the Universities are offered funds by the State to cover such basic and immediate needs, the State risks having to take responsibility for future unfavorable external evaluations that may even jeopardize the accreditation procedures.

Some core support for graduate programs appears appropriate. This may be used to initiate a project by awarding scholarships, paying for supplies and possibly also for invited speakers. However, full support for such activities should be secured through external funding.

A reward system could be considered for successful investigators based on objective criteria. Many funding mechanisms offer indirect cost and this could be used to support research infrastructures.

D. All Other Services

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

APPROACH

- How does the Department view the various services provided to the members of the academic community (teaching staff, students).

The university appears very supportive of student life, which is simplified by the concentration on a single campus (with the exception of the Agrinio schools).

- Does the Department have a policy to simplify administrative procedures? Are most procedures processed electronically?

Study guides are available electronically. Although some electronic automation of administrative procedures has started, it does not give students the convenience of web-based study-record access. Approximately 80% of functions are available but require the use of restricted in-office terminals, presumably for security reasons. Many administrative issues such as enrolment etc. are computerized.

- Does the Department have a policy to increase student presence on Campus?

Many students live off-campus, in the city of Patras. There is a convenient bus and rail link that allows easy access. The EEC was not made aware of any specific policies.

IMPLEMENTATION

- Organization and infrastructure of the Department's administration (e.g. secretariat of the Department).
  The Department's administrative services may seriously suffer after the recent lay-off of 118 employees. It is sad that the recent dismissals of key employees jeopardizes the computer automation of services (see also 'Long term actions proposed by the Department').
- Form and function of academic services and infrastructure for students (e.g. library, PCs and free internet access, student counseling, athletic- cultural activity etc.).

Gym facilities are excellent. A number of student dorms of graded pricing to suit the largest possible range of financial means. Students of the school of medicine have access to two libraries, a medical and a general one. Number and variety of textbooks available seems to be adequate. Wi-Fi is available campus-wide. A serious problem is access to on-line resources, specifically full-text journals. Although the main journals in each field are covered, the selection leaves out important publications and recent cuts have exacerbated the problem. This is due to a funding problem that is beyond the reach of the University and relates to funding of library facilities by the central government.

RESULTS

- Are administrative and other services adequate and functional?

No problems were brought up at the time of the visit. It has to be mentioned that the EEC visit occurred during a strike by the administrative personnel to protest potential personnel layoffs. Nevertheless, the striking employees accepted to see us for a brief group meeting. Their sense was that there is currently no serious problem with services provided but that there will certainly be, if their numbers decrease by layoffs.

- How does the Department view the particular results.

There is satisfaction with the work to date but anxiety about the impending cuts.

IMPROVEMENTS

- Has the Department identified ways and methods to improve the services provided?

The Medical School is fully aware that the only way for buffering impending cuts in administrative personnel is by rapidly developing informatics-based automation.

- Initiatives undertaken in this direction.

An effort undertaken in this direction is now at risk due to the impending layoff of a key

person. The EEC feels that layoffs should be made on a rational base and that the information technologies should suffer the least from them. There is chronic lack of technical personnel at the Medical School and this need to be amended.

Collaboration with social, cultural and production organizations

Please, comment on quality, originality and significance of the Department's initiatives.

Ample evidence was presented that the UP School of Medicine has developed in close contact and synergy with the community of Patras and the broader region. First, by the very nature of its vocation, a medical school interacts with the society in its daily practice. Substantial donations, with which two new pavilions have been built, testify to the community's gratitude. Remarkable are also student initiatives ranging from anti-smoking campaigns, to blood donation drives and organisation of cultural events.

An important pole of attraction for the community is the magnificent convention centre, built on campus premises. Among other things, it includes a 2,000 seat auditorium with sophisticated acoustics, regularly used for the highest-profile cultural events in the city of Patras.

The operation of a radio station and a gallery with art works of students, professors and patients is a great initiative that should be continued past the term of the present main actors. The fact that works of art of students of the University are exhibited at Johns Hopkins is commendable, admirable and worth copying by other Universities. It is refreshing to see that the exchange of scientific ideas is combined with the exchange of artistic expression.

E. Strategic Planning, Perspectives for Improvement and Dealing with Potential Inhibiting Factors

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

Please, comment on the Department's:

- Potential inhibiting factors at State, Institutional and Departmental level, and proposals on ways to overcome them.

The most obvious and immediately dangerous inhibiting factor is the current economic situation in Greece that has resulted in severe cuts and a freeze on hiring at all levels. It is to be noted that no positions to recruit new faculty have opened for the past four years (these are determined and financed directly by the Ministry of Education, the University being entitled to input but no decision-making power). To a large extent, this provides an explanation for "inverted pyramid" problem. This is not confined to academics but is even worse at the level of support personnel, where more than one quarter of the some 400 administrative personnel must be dismissed. The committee strongly feels that in order to survive this crisis, the school must assure that the cuts are not arbitrary but rationally optimised and complemented by the appropriate informatics automation. Unfortunately, there appears to be a lot of arbitrariness in these dismissals. First to go, it appears, were the very individuals responsible for modernising administrative work through computerisation. What complicates things is that, through the intricacies of Greek centralised decision-making, there was no distinction between hiring technical and administrative personnel for

many years, which has resulted in a lop-sided distribution in favour of administrative over technical personnel (especially considering the changing reality in manpower needs due to computer automation). The main problem is outside the powers of the university or the school but rationalisation of the dismissals should be the highest priority. Qualified technical personnel, especially in informatics, should be given priority in retention.

Another problem beyond the control of the School is selection of individuals for residency posts, or rather the absolute lack of it. There is no evaluation of competence for entering a medical specialty training programme. Graduates are enrolled in the waiting list of their choice of clinical unit and when their time comes, they have the right to go through the required years for specialty training with no check-points or evaluation of any kind until the final exam, at the end of training.

This process creates a number of problems. The most serious is that many of these lists are very long, condemning medical graduates to years of idleness, work as country physicians or work in unrelated fields, destroying the most productive years of their career. The inevitable consequence is a hemorrhage of the best and brightest, the most ambitious young physicians leaving Greece -- many of them never to return.

The lack of a meritocratic process for entering a medical specialty training programme obliges clinical units to accept residents whose competence levels and individual characteristics vary widely. In addition, there is no **institutionally mandated** systematic evaluation of performance during the years of residency training, no checkpoints to identify weaknesses and no pressure to accept feedback towards remedying them. This occasionally creates unacceptable situations in the functioning of the clinical units and interpersonal conflicts. In the case of UP School of Medicine, the EEC was pleased to see a very considerable progress away from the traditional Greek mentality that equates evaluation, critique and constructive feedback with confrontation. However, these approaches have no institutional coverage and must rely on personal initiative. Some clinical units (e.g. Paediatrics) have a very well-defined and detailed list of competences to be acquired at each stage of residency including written evaluations based on a form that supervisors must complete at defined time intervals. This approach should be adopted by all clinical units that train residents. This practice would ideally require a national standard for all residency training.

An important problem is the existence of state laws that compromise the proper function of the university. It refers to the doctoral degree for medical graduates. After the abolition of course credit requirements (and given the relatively permissive definition of quantity and quality of Ph.D. thesis work) this PhD degree does not meet international standards. Attribution of such doctoral degrees by the University jeopardises its credibility abroad and thus its accreditation.

- Short-, medium- and long-term goals.

The Division of Health Sciences is relatively small but covers a very large spectrum of activities ranging from Epidemiology to Public Health. This is considered ineffective and should be amended. The Division should discuss needs and expectations for support and services with other clinical and basic department and strategically develop a focus that best suits the needs of the Medical School as a whole. This information should then be used as a guideline for future hirings of new Faculty.

- Plan and actions for improvement by the Department/Academic Unit

The Department of Medical Physics has been particularly successful in the past and remains successful to the present day. It is considered a focus of the University and draws attention

internationally. It has reached some of the highest scores in international metrics among the different departments of the University including funding publications h-factors etc. It is unique in Greece and strong in the European area. It serves educational activities at a very high level and fosters active collaboration with the Industry. It is impressive that in the Biomedical Engineering program 50% of the students come from abroad! There also foreign students participating in courses without intending to complete the course. It will help the University to draw more on this strength and generate a focus point around this strength. An important task of the department of Medical Physics will be foster and strengthen interactions with other Departments and Units of the Medical School in order to maximize visibility. Only through interactions with other Departments will the Department of Physics realize its full potential within the Medical School, and the Medical School draw full benefit from this strong department.

- Long-term actions proposed by the Department.

Given the current financial uncertainty in Greece, long-term planning is extremely difficult and day-to-day survival seems to be the main preoccupation.

The School of Medicine has a considerable manpower force of young and dynamic faculty that can be used to promote and enhance its academic mission. Unfortunately, the hiring freeze is a problem that risks compromising this potential. The School sees as a high priority to seek financing from research and educational programs nationally and at the European level. Even as these are becoming more and more competitive, they appear to be the only source of resources for future planning. Programs initiated recently by the Ministry of education offer some, albeit small, assistance in this direction and the success of the Faculty in the recent Aristeia competition attests to their competitive positioning in their respective fields of study.

Regarding the government-mandated dismissals of support personnel, the EEC strongly recommends that the dismissals be targeted as specifically as possible to spare all personnel with technical expertise, especially when the technical expertise is related to information technologies or computer automation.

F. Final Conclusions and recommendations of the EEC

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

Conclusions and recommendations of the EEC on:

- the development of the Department to this date and its present situation, including explicit comments on good practices and weaknesses identified through the External Evaluation process and recommendations for improvement

In the middle of the fourth decade since its founding, the UP School of Medicine is entering its maturity years. The EEC was impressed by what has been accomplished in terms of establishing both an academically-based patient-care facility for the training of medical students and residents, and a laboratory-based research program. The main strengths and weaknesses are summarised below:

Strengths

-A critical mass of clinicians able to provide advanced tertiary health care and to transmit evidence-based knowledge, skills and attitudes to students and residents.

-Early adoption of modern approaches and principles in the medical curriculum (e.g. small groups, early clinical skills, integrated teaching, bioethics, PBL).

-Dedication of faculty

-A considerable strength in laboratory-based scientific research

-A good balance between laboratory and clinical research.

Weaknesses (many of which are systemic and beyond the powers of the School)

-Inadequate faculty numbers, especially at the more junior levels (hiring freeze, inverted pyramide).

-Obligation to admit twice as many students as it is realistically possible to train.

-Lack of requirement for prerequisites for more advanced courses.

-Slow implementation of OSCE, 10 years after the adoption of the new curriculum (probably related to the above two problems).

-Lack of control over qualifications of residents admitted to the training programmes.

-Degradation of the MD-Ph.D. degree by the abolition of course requirements.

-Although the number of publications would indicate a good balance between clinical and laboratory-based research, the most prestigious and more highly peer-reviewed funded research belongs to the latter category.

- the Department's readiness and capability to change/improve

The EEC detected enthusiasm, receptiveness of constructive feedback and willingness to undergo changes towards continuing improvement. There was no resistance to evaluation; on the contrary, there was pride in showcasing achievements and willingness to listen. There is a learning curve as in the reviewed cycle all departments participated in the evaluation. In a previous, internal attempt only 14 departments complied!

The EEC was also particularly pleased with the excellent cooperation between the University and Hospital. This good cooperation is vital for the effective operation of the Medical School as a whole and should be maintained and fostered. It should be an important parameter in all future decisions regarding Hospital director. However, no University funds should be used to fund operations at the University.

- the Department's quality assurance.

QA is assured by a committee of high-level faculty (OMEA), which collects evidence from a variety of sources. Evaluation questionnaires from both students and faculty appear to be the main source, in addition to tabulating publication metrics and personnel statistics. The committee's mandate is confined to the strictly academic mission. No evidence of QA measures for the patient care activities (such as incident reporting and tabulating) was presented. However, we were assured that QA measures for patient care activities are mandatory and it is governed by strict rules regarding implementation. It was clarified that the data were not available through the MS-UP administrative services because they are the responsibility of the University Hospital administration

The EEC saw some divergence between where the University wants to be, or where it should be, and where it is now. While this is natural, future improvement will be accelerated (and measured) if a strategic plan is developed with milestones that are checked at regular time intervals. The implementation of mechanisms to make the necessary corrections will be crucial. An effort should also be made to generate a widely accepted vision for the Medical School emphasizing and strengthening areas of excellence. In this regard it will also be instructive to generate indicators of competitiveness apply widely and use them consistently internally. The problem of the aging faculty must receive top strategic priority. The inverted

pyramid scheme of faculty distribution should be reversed at a steady pace in a timely fashion.

Members of the Committee

UNIVERSITY OF PATRAS

MEDICAL SCHOOL

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