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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

MEDICAL SCHOOL

NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

External Evaluation Committee
The Committee responsible for the External Evaluation of the Department of Medicine (Medical School) of the University of Athens, consisted of the following five (5) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005 :

1. Prof. Filippos V Theodosopoulos, (Chair)
   University of California San Francisco, CA, USA

2. Prof. John Alex Elefteriades,

School of Medicine, Yale University, USA

3. Prof. Nikolaos Venizelos

School of Medicine, Orebro University, Sweden

4. Prof. Agapios Sachinidis

School of Medicine, University of Cologne, Germany

5. Prof. Dimitris Grammatopoulos

School of Medicine, University of Warwick, UK

Introduction

On Monday February 17th (9.30-11 noon) at ADIP's offices, the 5 members of the committee met with ADIP staff, who briefed them all in the process of the evaluation. Thereafter, the group was transported to the Kostis Palamas conference center of the National and Kapodistrian University of Athens.

The committee was warmly welcomed by the Head of the School of Medicine of the University of Athens (SoM UoA), Prof. Dimopoulos and the rest of the leadership of the school, including the ex-Head of the School Prof. Stefanadis who oversaw the process of internal evaluation of the Medical School.

There were a number of presentations by the School leadership that covered the historic, educational, research and clinical endeavors. The detailed schedule for the three days of the formal evaluation was as follows:

Moday 17/2/2014

11:30: Arrival of Committee

12:00 Beginning of presentations

12:00-12:30 Professor Dimopoulos, President, UoA Medical School "Overview of the School"

12:30-13:00 Professor Stefanadis, ex President, UoA Medical School, Mr Zografos, Secretary, UoA Medical School and Assistant Professor Psaltopoulou "The Internal Evaluation Process"

13:00-13:30 Professor Georgoulis "PreClinical Curriculum"

!3:30-14:00 Professor Sfikakis "Clinical Curriculum"

14:00-15:00 Break and light lunch

15:00-15:45 Professor Tsakris "Post-graduate study programs"

15:45-16:30 Assistant Professor Terpos "Research and Publications"

16:30-17:15 Professor Spiliopoulou "Research Programs and Financial Support of the School"

17:30-18:00 Meeting with the Vice Rector of the Univeristy for Student Care and International Relations, Professor Liakakos

18:00-19:00 Brief meeting of the two evaluation committees

17:30 Dinner

During the second day (Feb 18) the committee visited several educational clinical sites. Specifically we visited:

Alexandra Hospital (Ob Gyn, Therapeutics). There was a separate meeting with students in the absence of any teaching staff. We also observed directly clinical teaching on the wards.

Aiginiteio Hospital (Psychiatry, Neurology, Radiology Laboratory)

Ippokratio Hospital (ENT, Cardiology, Surgery)

Medical School at Goudi (histology-embryology, medical physics, histopathology)

"Aghia Sophia" Children's Hospital, Athens (Pediatrics)

"Aglaia Kyriakou" Children's Hospital, GOUDI Athens (Pediatrics)

During the third day (Feb 19) the committee visited the **University General Hospital Attikon**, Athens. After a brief introduction we met with a group of hospital leaders as well as with students separately. We inspected the facilities and teaching methods by directly observing student teaching on the wards.

Subsequently we returned to Kostis Palamas building and met with a large group of self-selected students who volunteered to meet with the committee without the presence of any faculty. We also then met with

a large delegation of the administrative team of the school.

On Friday morning we had a short working meeting with the leadership of the school and relayed to them the major findings and areas of concern identified.

The various interactions with students were felt be adequate, informative and appropriately interactive. The students in general appeared to be involved in the process and committed to the improvement of the school.

There was extensive material available for our review and the staff of the school was very accommodating in various requests for additional material. It should be noted that the very lengthy internal review document completed in 2011 was made available to the committee only a day prior to the committee's arrival in Athens. This was not appropriate and did not allow for adequate preparation of the members of the committee. We found the internal report to be adequately descriptive but with *little summative critical commentary* and lacking in guidance for specific suggested changes.

Throughout the many discussions that the committee had with all members involved it became apparent that there are several limitations that plague the Greek health and educational system that are beyond the control of the SoM. Some of these are major issues that directly impact the work and effectiveness of the School. The following are some of the issues identified:

1) There is a large number of additional students well above the advertised yearly student positions. Given the Greek legislation the school has no control over the number it has to accept. For example, in 2013 there were 160 advertised first year positions and the total number of matriculated students was 280. Additionally, there are more than 1,000 students who have participated in their studies for six plus two (6+2) years and have not officially completed the graduation requirements.
2) There is an obscure system of specialty training following medical school graduation (under the auspices of the Ministry of Health) Waiting lists to start residency training average five

years and there is no meritocracy or examination involved in the process. This makes career planning difficult for medical students.

3) There are laws that govern higher education in Greece that are constantly shifting and changing. They seem to be a strong contributing negative factor in the development of a strategic planning for the school.
4) The complete independence of the faculty teaching work that is enshrined legally. This undoubtedly leads to lack of the update and coordination in the collective teaching work of the faculty.
5) We are informed that due to generalized austerity measures there is an imminent loss of state funding for 50% of the administrative support staff members.
6) The diminishing state budget for the University of Athens as well as the obscure financing of higher education makes it difficult for the committee to understand the possible support structure of any suggested strategic plan.

A. Curriculum

Undergraduate curriculum

The actual curriculum, as was presented, was appropriate. There appears to be appropriate design of the structure of the overall curriculum. During the preclinical (year 1-3) years there is substantial emphasis on basic sciences which is appropriate. There is evidence of some overlap between courses, particularly in molecular and cellular biology (General Medical Chemistry, Biology and Biological Chemistry); the latter being essentially a basic Biochemistry course. Care should be taken to avoid redundancies in subject content. The Committee felt that the breadth of clinical rotations and curriculum is commendable.

The actual curriculum (as evidenced in the internal evaluation review)

appears to be structured in a descriptive uniform fashion and the SΘoM should be commended on that. However, there is variability in the extent of description of the goals of objectives. What is not well documented in some is the timing and extent of revision of the course curriculum. More detailed information with respect to the specific goal and objectives and level of revision of each course should be provided.

There appears to be a few areas of opportunity in the expansion of the curriculum. Specifically, a course on critical evaluation of scientific and medical literature, a structured introduction to clinical medicine (as a bridge between the preclinical and clinical years) as well as an introduction to the demands on a recent medical school graduate (independent practice) would be worthwhile additions. In order to facilitate the additional load, a re-evaluation of courses with less modern clinical applicability as an effort to adapt to a more modern educational paradigm should be considered. Close collaborative ties with other European Schools of Medicine may prove to be of use in keeping up with the international state of the art educational activities.

IMPLEMENTATION:

The curriculum appears to be structured rationally and have clear progression. There appears to be appropriate balance of theoretical and practical/clinical sessions. However, we felt that the undergraduate Curriculum supports comprehensively the theory of medicine; it was evident by the interviews of both junior faculty and all the students we met that the Curriculum could be strengthened by more emphasis on the practical aspects of the clinical rotations. We observed several examples of innovative teaching practices and we list examples in the Best Practice section. However, there appears to be significant variability in the hands-on training of the students in laboratory rotations during the preclinical years. An increased emphasis of hands-on experience would undoubtedly enhance the effectiveness of implementing the curriculum.

Given the size of the school and the geographic distance between

locations (particularly during the clinical years) added flexibility may be considered to cover more effectively the education needs and effectiveness of the curriculum (ex. Afternoon/evening hours for additional exposure to preclinical laboratory work)

Although there was limited exposure of the committee to the financial support of the various individual courses there seemed to be sufficient resources for the basic implementation of the curriculum. However, significantly increased financial support for improved infrastructure would be necessary to enhance the educational experience of the students and meet the levels of similar programs of medical education at European and American universities.

There appears to be limited coordination of curriculum implementation during the preclinical and primarily during the clinical years. Subjects that are taught at several different departments appear to have limited common goals, methods and examination material. This may result in different quality of expected teaching outcome. More central coordination of the teaching efforts is strongly encouraged to minimize variation across the school.

RESULTS

It is unclear to the Committee what are the exact goals and objectives of the SoM or how the school identifies and distinguishes itself within the national and European medical school system. Although there is a historical description of the traditional and generic goals of the school there is a lack of specific current goals and objectives. Additionally there are no clearly articulated processes of identifying deficiencies in the internal evaluation report. In fact the report indicates that with respect to the evaluation process there is no suggested improvement, something that is rather surprising given that this is the first internal evaluation process ever performed.

There appears to be effective implementation of the curriculum and overall success in the overriding goal of producing well trained doctors at the end of the training. However there are several factors that impede the successful implementation of the curriculum. There was an overall appreciation by the committee that the students felt the

variability in course quality across the various sites is worrisome and may impede the overall quality of successful implementation of the curriculum. The aforementioned recommendation of increased central coordination and wider practical (hands-on) exposure of the students is urgently needed. We would also strongly recommend that any subsequent internal evaluation be more of a critical than a descriptive process.

IMPROVEMENT

Overall the committee felt that there is sufficient talent, interest and desire from all involved (faculty, students, management and staff) to identify deficiencies and improve the educational level, which the committee observed overall to be very good.

Although there appears to be significant consideration for strategic changes by the leadership to address ongoing improvement based informal conversations by the members of the committee there are no identified suggestion for improvement in the internal evaluation report.

B. Teaching

APPROACH:

- The UoA SoM has a clearly defined program of studies with a delineation of rotations per year of study that are appropriate. Based on the student feedback there is good adherence to the scheduled rotations per year. No issues with respect to scheduling of rotations were identified.

- There is a clear commitment by the faculty and the leadership of the SoM to deliver the best possible education experience in higher education in Greece as they appreciate the gravity of the position of the SoM as the most important and biggest University Department in Greece. The overwhelming pedagogic approach seems to be the traditional classroom, lecture driven one. For the required preclinical subjects it usually corresponds to auditorium presentations with hundreds of students. Although the committee appreciates that there is no mandatory attendance required, in practice there is variable student participation and interaction. In addition, there is a great variability of planned interactivity by the faculty of such lectures. It became clear to the committee from the interactions with students that more interactive sessions are needed. It seems that there is limited consideration of the student knowledge and the subjects are taught more based on the faculty expertise. This was felt by the committee to allow for a missed opportunity for enhanced learning by the students. It is advisable to implement more up to date teaching methodologies such as direct in classroom feedback technologies and inter-professional learning pathway.

- In the setting of laboratory sessions there appears to be variable and overall limited practical/hands on exposure of many students. This should be assessed by the leadership and

corrected appropriately.

- In general we felt that there is a need for a significant update and coordination of the pedagogic philosophy of the SoM with focus on the individual student knowledge, needs and progression during the duration of each class. Implementation of methodologies for monitoring that the educational goals are met continuously and that deficiencies can be identified and corrected in a timely fashion. There appears to be an overwhelming reliance for the purpose of successful completion of courses on the final examination that often is felt by the students to be representative of details, sometime obscure, than on the general principles of the subjects.

- Of particular concern were comments made by several students that surgical rotations were evaluated almost solely on final written examination and book knowledge. There seems to be no clear requirements of practical skill development and mandatory participation in the operating room setting. The committee feels strongly that surgical rotations should not be passed without some intra-operative exposure and experience.

- Despite the extensive evaluation by the committee of multiple teaching sites there is no clear understanding of the *degree* of direct faculty/student interaction. This problem may becomes more prominent during the clinical training, when the teaching commitments of the senior faculty are in conflict with their clinical duties resulting in junior staff (i.e., residents) overtaking large number of the teaching duties without the required supervision by a senior staff member. There seems to be significant variability (site specific) of faculty/student interaction.

- The teaching student/faculty ratio is 2.89 for the active students (6+2 years). The ratio becomes 4.57 when the complete number of registered students is included (additional 1,090 students who are

beyond the 6+2 years). Either ratio appears acceptable to the committee according to the standards

- Despite the rather impressive low ratios observed there is an overwhelming request by the students for increased direct faculty interaction. The establishment of a mentoring program may be one solution to this problem as the clinical load of many SoM faculty is very demanding.

- The committee understands the overall enmeshed academic clinical load that each faculty member has within the Greek system. Nonetheless, a shift towards a system where percentage effort in the various aspects of academic work (teaching, education, research) may allow for improved faculty student interactions. Additionally, the committee has no information on the distribution of the education load amongst the faculty in all the various sites.

- Through multiple conversations with senior and junior faculty members as well as students it is apparent that there are individuals who effectively volunteer their private time for their academic duties. Although this exists in most international academic settings, as applied in the SoM UoA it contrasts with the "public service" mentality that some exhibit. The committee was rather surprised to hear from students at all three group interactions that there is a significant minority of faculty members who are indifferent to medical education and do not engage the students. Although the committee had no ability to corroborate such comments we would demand the leadership to adequately evaluate the students' concerns. Along this line of concern, no clear criteria/process of how faculty is evaluated with respect to their fulfillment of their academic/teaching mission were identified.

- Although there is a wide and solid understanding of information technologies by the students and the presence of free wi-fi and access to medical databases there is limited incorporation of such technologies in everyday teaching. There seems to be an over-reliance on traditional book-based learning and less use of up to

date medical information. Additionally, there is limited online access to course material. The use of non-traditional modalities of learning should be supervised and encouraged by the teaching faculty. This is of particular importance as we have heard from multiple students that the free book supplies included in their courses have been severely limited over the past two years.

- There appears to be no one single form of examination. Having said that there is a preponderance of standard end of the session/semester written exams (multiple choice or open ended). There also appears to be independence of the various clinical departments with respect to the formulation, content and execution of the final examinations. During clinical rotations, this results into grade inhomogeneity as well as inequality for similar performance in the rotation and examination based on the difficulty of clinic attended. There also seems to be no clear indication of the relative weight of each question/subject assessed in the final exam into the resultant grade. Increased coordination and standardization of the exams would be a *strong* recommendation. Additionally, use of simulated patient presentations during exams (actors, computerized) would be a welcome addition.

IMPLEMENTATION

- From limited exposure it appears that the teaching materials, resources and procedures seem to be adequate and fit for its purpose. There is however an individual approach to the selection of teaching material by each faculty, even in courses that have multiple sessions in different clinics. Uniformity of teaching material should be encouraged and should be centrally coordinated.
- There is very limited integration of research into the daily teaching. This is surprising given the extensive publication effort and research activities of the school faculty.
- Although there is an attempt to standardize end of the session written evaluations this seems to be variable applied and

inadequately implemented. As this is the first introduction of such evaluation processes it is imperative that comments made are headed by the faculty and addressed in the most appropriate fashion. Examples of changes made after student comments were scarce by the students and need to be recorded and audited.

RESULTS

- Although there appears to be some discrepancy between the success/failure percentages between courses we have limited information of the reasons underlying this finding. In the committee's experience the results presented for the many courses where data of final examination were available, the variation is within the accepted norms.
- There is an accumulation of students who complete 6+2 years of studies and have not graduated (total # 1,090). We were given no information as to the exact status and performance of this surprisingly large cohort and the SoM needs to find a permanent solution to this circumstance.
- As there seems to be little quantifiable evidence of success when measured at the SoM level, an effort to define metrics that could be followed into the future for success is warranted.

IMPROVEMENTS

- The end of subject written evaluations seem to be the major way of deficiency identification. However there is no defined follow up process to implement change.

- At the SoM level, although there appears to be no defined process for identification of deficiencies or improvement, there appears to be a significant willingness of the SoM leadership to work on improving quality of education.

C. Research

APPROACH

General comment:

Although our committee was not involved in the evaluation of the research endeavors of the SoM and the graduate program evaluation committee carefully studied the issue we observed that the majority of the faculty is involved in research activities of various scientific rigor. This is clearly commendable and serves as a good example for the students. It is the wish of the committee to see an expanded integration of in house research projects and achievements into the teaching curriculum as medicine has evolved into a highly scientific field. Along this line, efforts in teaching the scientific methods, project writing and development and critical evaluation of projects are encouraged.

D. All Other Services

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

- The Committee had limited interaction with the administrative staff of the SoM. However, it is apparent that the staff members as well as their leadership are highly disciplined, engaged and committed individuals who truly love what they are doing. Proof of that is the fact that several members have worked with deferred compensation over several months during the difficult economic times for the Greek state. The committee wishes to express their concern with the present situation as any further

reduction of financial support to the school will most certainly make it a complete aberration to any similar services at any medical school in Europe or the USA and it will undoubtedly have potential catastrophic results for the level of support students enjoy and require during their studies.

- There appear to be adequate welfare services for students. Included are free housing and alimentation, free health services, free books and internet access.
- There is limited career guidance that the students report they receive during their studies. The establishment of a career support office that can help lead students into their post-graduation career would be a welcome addition.
- Infrastructure and equipment relevant and necessary for learning although in existence is of limited accessibility. As the various sites are geographically distant and the city of Athens has grown tremendously in size, limited availability of such resources may cause undue difficulty in learning by students. A careful evaluation of this should be undertaken.
- There are severely limited financial resources for students currently. It is the hope of the committee that this issue will be addressed and students will be able to get funding for travel and research in the near future.

Collaboration with social, cultural and production organizations

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

The SoM at the UoA is the largest and most prestigious higher education institution in Greece. As such it is well integrated in the local community, culture and environment.

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

The leadership of the UoA SoM had the opportunity to present their vision and strategic plan for the short, medium and long term both formally with presentations as well as in informal discussions during multiple opportunities over the course of the five days. The following are the various significant points that were highlighted:

1) Renewed emphasis on the undergraduate curriculum development and modernization.
2) The development of an evaluation process that takes into account the ratios of time utilized in all three of the main academic missions, namely clinical, research and education.
3) Continuation and strengthening of the relationships of the school with the Greek public and its institutions. Other than the direct obvious bilateral benefits, this may identify specific and regional/local disease/research opportunities for translational research that may further promote the schools other missions.

F. Final Conclusions and recommendations of the EEC

Best Practices

The committee identified a number of individual efforts that were above and beyond not only the norm of the rest of the School but also the suggested basic standard recommended. The exposure of the committee naturally was limited and by no means we felt that we identified all the current efforts that were outstanding in this way. Nonetheless we felt strongly that examples identified should be included in the report. A list of best efforts identified by the committee included the following initiatives:

a) Involvement of students in an internationally competitive research laboratory by a faculty member
b) The availability of training material after hours in an electronic format
c) The incorporation of end of rotation feedback into the structure of the course in subsequent offerings
d) The presence of a procedure logbook
e) An end of the rotation conference between the teaching faculty and the students to discuss the written evaluation
f) An end of rotation common examination among the various clinical sites

Based on the assessment of the committee of all observed aspects of the UoA SoM there are several areas of opportunity that were identified. We propose the following conclusions and recommendations:

1) There is a lack of clinic wide and central (school wide) documentation of the process of curriculum development and continual improvement of the educational process. The implementation of a structured process guided by a standing educational committee would be an essential improvement.
2) Within the Hellenic academic system there appears to be a lack of separation of the educational and clinical role of the faculty of medicine that results into an unclear hierarchy of the implementation of the educational process. The development of an independent structure within the SoM that reports to the office of the President and is charged with all aspects of oversight and implementation of the curriculum and educational mission of the school is imperative.
3) Based on the observations of the committee there is a preponderance of the use of the old and traditional teaching methods. Those include primarily lecture teaching and evaluation by written final examinations. There is an opportunity for wide introduction of newer established pedagogic methods that seem to be already used by select faculty of the SoM.
4) Of concern to the committee there is a lack of coordination between subjects as well as the specific course of studies for the

same subject taught at different clinical locations. Although there are subjects which are well coordinated (ie Internal Medicine), they are rather the exception than the rule. This results in duplication of material taught and potentially inefficient use of time. This may also lead to lack of uniformity of educational outcome, disparity in the student experience and grading statistics.

5) There is a widespread opinion by the students that the practical aspect of their education (laboratory preclinical courses and clinical rotations) is insufficient and lack appropriate depth. This applies equally to the physiology laboratories where the demonstration of the ECG was only didactic and not practical as well as the surgical rotations where a student can receive an honors grade without ever having entered the operating room. It also applies to the amount of direct student patient interactions on many clinical rotations. The hope of the committee is that in order to offer the best education possible to the student hands on experience has to be dramatically enhanced and become a substantial part of the curriculum. (a practice based curriculum)
6) Equally, in some clinical rotations the students opined that there is clearly insufficient attention by the teaching staff. There needs to be immediate attention to any such subjects/practice. This should be a standing item on the agenda of the aforementioned education committee.
7) Along the same lines, a general culture of continued evaluation and improvement needs to be fostered and adopted. The faculty and leadership appear clearly in favor of such a culture yet the lack of specific processes, introduced or fully adopted, hinder the effective implementation of such practices. For example, although there is widespread use of end of rotation evaluations, there is no clear path to remediate valid criticisms and introduce improvements and test effectiveness.
8) There appears to be a largely inbred unusually high percentage of 'home-grown' faculty appointed without any significant track-record in competitive appointments in national or international institutes. The committee appreciates that this is multifactorial some of which may not within the scope of the committees

evaluation. However, we were unable to assess and identify the benefits of such approach. We would strongly encourage the leadership to adopt a strategic recruitment process that is unbiased, outward looking and programmatic. To enrich the skill-mix and general exposure to different practices and mentality perhaps the leadership should introduce a quota of new appointments reserved for academics without any previous association with the SoM.

9) There is a lack of professional development orientation and advice to the undergraduate students. A career development office should be entertained.
10) Continued medical education for the faculty, in particular with respect to new teaching paradigms would be an important enhancement of the educational process. Although this process has been started it should be expanded to include all faculty.
11) There is a worrisome lack of financial support of the administration of the SoM and we are told that half of the staff may be terminated shortly given the lack of central funding. Based on close direct evaluation by the committee we would like to express our strong concern for such a development in practice would have a severe impact on the education of the students and the successful implementation of any proposed and adopted changes.

The Members of the Committee

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