FACULTY OF MIDICINE
KING ABDULALAZIZ UNIVERSITY

Institutional Self-Study
Summary Report

Prepared for:
Liaison Committee on Medical Education
and
Committee on Accreditation of Canadian Medical Schools

2008-2010

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INTRODUCTION

The Faculty of Medicine (FOM) at King Abdulaziz University, Jeddah, Saudi Arabia was established in 1975. At the time, it included two programs, a Medical Program and a program for Applied Medical Sciences; hence, it was named the Faculty of Medicine & Allied Medical Sciences FOM & AMS. A 250-bed university hospital (King Abdulaziz University Hospital – KAUH) constructed in temporary buildings was used for teaching. In September 1975, the first group of undergraduate students was accepted; this group consisted of 64 undergraduate students, and 40 other students transferred from other universities. The number of faculty members at that time was 23 faculty members in 11 departments. In 1991, a Dental program was added to the FOM & AMS. In 1994 (1415 H), the FOM & AMS moved to the current medical center which includes 16 new academic buildings in the male section and 8 buildings in the female section, a new 847-bed hospital, and King Fahad Medical Research Center. In 2003, the Faculty of Applied Medical Science and the Faculty of Dentistry were separated from the FOM as two other independent faculties in new buildings. Currently, the FOM has 8 Basic Sciences Departments (Anatomy, Physiology, Microbiology, Parasitology, Clinical biochemistry, Pharmacology, Pathology, and Genetics), and 13 clinical departments (Medicine, Surgery, Obstetrics and gynecology, Pediatrics, Hematology, Otorhinolaryngology, Anesthesia, Ophthalmology, Radiology, Urology, Orthopedic Surgery, Family and Community Medicine, and Emergency Medicine, as well as a recently established Department of Medical Education. The curriculum is 6 years followed by one year of internship. Students are taught in English. Currently, there are 537 full time faculty members (Prof, Associate Prof, Assistant Prof, Lecturers, and Demonstrators). Every year the FOM admits about 350-400 students, 50% of them are female students. In the first 3 years, male and female students are taught in separate sections – Male section and Female section. The educational resources in these two sections are similar. Clerkship years (4th, 5th, and 6th) are taught mainly at KAUH and the Clinical Skills Center (CSC) located in this hospital. At present, 4 other affiliate hospitals are used as teaching sites by faculty members from the main campus. Interns (7th year students) receive their training at KAUH as well as other accredited hospitals. A traditional discipline-based curriculum was used to teach students. In the academic year 2006/2007, a new curriculum that is "System-Based Hybrid" curriculum was launched. The FOM has established partnerships with several internationally renowned medical schools such as Harvard School of Medicine, University of Illinois at Chicago, University of Sydney, Monash University, and Maastricht University.

Academic and professional accreditation of the FOM by an international medical education accrediting body was one of the 50 operational projects developed to accomplish the strategic plan of the FOM for the period 2007-2012. Due to absence of an international medical education accrediting body as such, the FOM sought to adopt the accreditation standards of a renowned accrediting body that uses stringent standards to deliver high-quality medical education. The "Liaison Committee on Medical Education" of the USA and its Canadian partner "The Committee on Accreditation of Canadian Medical Schools (CACMS) were chosen for this purpose. Early in 2008, communication was made with Professor David Hawkins, former executive director of the Association of Faculties of Medicine of Canada and permanent secretary of the CACMS, to assist the FOM achieve this objective. The FOM then initiated the process to meet the LCME standards in May 2008. A task force, referred to as the "Main Accreditation Committee" and 6 subcommittees were formed by the Dean for this purpose. The main accreditation committee comprised 23 members including the Dean, subcommittee chairs, junior and senior faculty members from basic and clinical science, an administrator, and 3 medical students. A professor not involved in the administration of the FOM was appointed as the chairman of this committee. The 6 subcommittees formed correspond to the six major domains outlined by the LCME, namely: I.A. Institutional Setting, Governance and Administration (7 faculty members, an administrator, and 4 students); I.B. Institutional Setting, Academic Environment (8 faculty members, 2 administrators, and 4 students); II. The Educational Program for the MBBS Degree (23 faculty members, 2 admistrators, and 5 students); III. Medical Students (17 faculty members, 2 admistrators, and 4

students); IV. Faculty (18 faculty members, and 1 admistrator); and V. Educational Resources (18 faculty members, 1 admistrator, and 4 students). Each subcommittee (membership listed at the end of this report in Appendix 1) has broad representation to ensure that a wide and inclusive view of issues was obtained. Twelve other ad hoc committees had to be formed during the self-study process to accomplish specific tasks. The main accreditation committees and the subcommittees began to conduct the self-study in May 2008. Areas of partial or non compliance were discussed in the Main Accreditation Committee and remedial actions were taken to resolve them. All committees met regularly at least once every 1-2 weeks for the whole period of the self study which was completed in December 2010. All subcommittees concluded with a written report. Reports, database, and appendices of the subcommittees were compiled in the way recommended by LCME. The Main Accreditation Committee oversaw this process, reviewed subcommittee findings and recommendations and then synthesized them into this final report summarizing the results of the self-study and the remedial actions taken by the FOM to resolve any areas of partial or non-compliance. In addition to the self-study conducted by the FOM, students were also requested and helped to perform their own "Independent Student Survey" without any influence from the administration. The results of the student survey have been summarized in a separate report. The final faculty self-study and the student self-study reports will be posted on the faculty website at the time of submission to stimulate on-going review and action.

As the end of the self study came close, Prof. David Hawkins was approached again to convene a team from LCME and CACMS for an on-site survey on 26 February to 2 March, 2011. Arrangement was then made with three other LCME surveyors, namely: Professor Frank Simon, former Secretary of the LCME and Adjunct Professor at Feinberg School of Medicine, Northwestern University, USA; Prof Michael Reichgott, Associate Dean for Clinical Affairs and Graduate Medical Education, Director, Conflict of Interest/Human Subjects Protection, Chair, Einstein Institutional Review Board, Albert Einstein College of Medicine, Bronx, NY, USA; and Dr Barry Linger, Associate Dean for Medical Education and Faculty Development , Charles E. Schmidt College of Medicine, Florida Atlantic University, USA.

The FOM did indeed take good advantage of this self study process and the LCME standards to resolve any identified deficiencies and it is looking forward to having the on-site survey by the LCME/CACMS team to show its strengths and get accredited in the same way the North American medical schools do.

I. INSTITUTIONAL SETTING

A. Governance and Administration:

1. Describe how institutional priorities are set. Evaluate the process for and success of institutional planning efforts, and discuss how planning has contributed to the accomplishment of the program's educational, research, and clinical services missions.

The Faculty of Medicine (FOM) has an approved strategic plan which is achievable with the available resources. The first strategic plan (2007-2012) was based on an internal (**S**trengths and **W**eaknesses) & external (**O**pportunities and **T**hreats) environmental analysis (SWOT) from which the institution derived its strengths and weaknesses as well as the opportunities and challenges it has to grasp and face, respectively. The analysis was objective, inclusive, with participation of internal stakeholders and external stakeholders. The results of the analysis were communicated to the stakeholders embodied in the academic leaders, faculty staff members, and administrators. The Faculty's strategy aligned to that of the university, whereby the first priority in the first strategic plan of the university was "Academic Advancement". Hence, the heart of the first strategic plan of the Faculty was pivotal to "Curriculum Development". Consequently, the old mission of the Faculty, which was formulated in (2004), was axial to educational quality.

The Faculty's mission is set to be revised and reviewed every five years; hence, in May 2009 the mission was revised enlightened by the preliminary initiatives of the university's strategies for its second strategic plan which concentrated on all three pillars of any educational institution: "Education", "Research", and "Community Engagement". Consequently, the Faculty reformulated its mission and vision which were approved in the Faculty Board on 18/10/2009. The mission reflects the inclusive role of the Faculty in education, responsibilities towards the community, and its anticipated role in scientific research in conformance to the community needs and development. A representative sample of the stakeholders participated in revising and updating the mission, which was distributed to all departments, discussed and approved in departmental meetings and subsequently ratified by the Faculty Board. The mission is publicized to stakeholders in various forms: wall portraits in all buildings, brochures, identity cards, as well as on the Faculty's website.

The Faculty's strategic objectives are based on the SWOT analysis results, and serve the accomplishment of its mission and vision. The 12 objectives are specific, measurable, and achievable. A representative sample of the stakeholders participated in setting the strategic objectives which were discussed with staff members and approved in the Faculty Board. To accomplish the strategic plan of the Faculty, it was translated to an operational action plan which comprised 50 operational projects, categorized into five main categories: Curriculum, Development of skills, Quality, Finance, and Partnership. The operational action plan displayed prioritization and logical order of its operational activities in the way that ensures accomplishment of the plan. The action plan is backed by a budget which ensures its fulfillment [See Appendices File - Section I, Appendix 3.1 (SI-A3.1): "FOM Strategic Plan for 2007-2012"].

The strategic plan is revised every two years; the last review occurred in December 2010 and a report was issued and discussed in the Faculty Board on 1 January 2011 [See Appendices File - Section I, Appendix 3.2 (SI-A3.2): "Accomplishment Evaluation Report"]. Regular monitoring is realized to be a mandate by the academic leadership; as a result a committee chaired by the Vice Dean for Quality & Development (VDQD) has been recently formed to conduct, in collaboration with the Quality and Academic Accreditation Unit (QAAU), monthly monitoring of and biannual reporting on the extent of accomplishment of the remaining operational projects in the first strategic plan.

Strategic planning helped accomplishing the program's educational mission through developing an education program that conforms with national & international academic reference standards; developing a curriculum which ensures the implementation of the intended learning outcomes (ILOs) in all domains (Knowledge, cognition, interpersonal and responsibility Skills, communication, information technology, and numerical skills, and psychomotor skills) across the program; promoting faculty members' professional development; providing safe, accessible, effective, and efficient teaching environment; improving the assessment of student outcomes; developing a system for monitoring and evaluating the quality of curriculum achievement. In addition, enhancing the educational process through the application of active learning principles is fulfilled through defining and optimizing active learning activities; developing further integration between formal curricular and extracurricular learning activities; developing and fostering opportunities for student involvement in research activities and service learning. In addition, the faculty plan aimed at providing an integrated package of student care services in a way that would achieve the mission and objectives of student activities.

Strategic planning also helped accomplishing the program's research mission. This is achieved via encouraging on-campus provision and innovation of graduate programs; international scholarships and fellowships for residency training programs in all specialties; developing external and internal partnerships with reputable institutions in research; creating interdisciplinary activities; and setting clear criteria for admission and enrollment, efficiency of administration, graduate studies and research plans, course design and specifications, teaching quality and environment, internal quality standards, outputs of the education process, academic supervision, graduate student services, and performance evaluation systems. A research bioethics unit was established in 30 March 2010 with a research bioethics code. Moreover, the availability of centers of excellence and scientific chairs as well as King Fahd Research Center further asset for nurturing research and graduate studies.

Strategic planning drove also the accomplishment of the program's community engagement mission through maintaining the services provision to the surrounding community by finding out practical mechanisms for establishing continuous cooperation in order to exchange benefits in education, research, consultancies, and training; promoting community engagement by fostering internal and external partnerships; advertising the possible projects which can solve community problems to obtain grants and endowments; as well as community needs assessment for health services, education, and research.

The university's second strategic plan (2013-2017) prioritized its goals and stressed on increasing its scientific and intellectual contributions in the Kingdom of Saudi Arabia (KSA) and abroad, through scientific research and innovation; achieving its mission in the improvement of the society through cultural and scientific excellence and pioneering research, and working to achieve its desired identity not only as a multidisciplinary university, but also as a research university, electronic university, entrepreneurship university and thinking university, in accordance with the requirements of the society. In addition, the university strives to: raising the internal and external efficiency of institutional performance and assuring its quality of performance in accordance with quality standards for institutional and academic accreditation and the overall quality certificates for other areas, such as administrative work, laboratories, and environment; working to increase resources through budgetary allocations or self-financing resources and good stewardship of those resources; establishing media outreach to the community and strengthening its various programs and tracks. The student is put in focus and priority attention to provide a stimulating and positive learning environment that enables the gain of scientific knowledge and other communication skills, and self development of skills to be fully prepared for employment. The university aims at upgrading its ranking at both the regional and international levels especially in the fields of scientific research and technology transfer.

All these future goals are put into consideration in setting the goals of the faculty's second strategic plan in the period 2013 - 2017.

2. **Evaluate the role of the governance structure in the administrative functioning of the medical school. Is the governance structure appropriate for an institution of this size and characteristics? Are there appropriate safeguards in place to prevent conflict of interest at the level of the governing board, and are these safeguards effective? Describe any situations that require review by or approval of the governing board (board of trustees) of the school or university prior to action being taken.**

There is an organizational structure in the FOM that is compatible with its size and nature of activities [See Appendices File - Section I, Appendix 9 (SI-A9): "Organizational Structure Chart"]. The structure displays clear horizontal and vertical relations among its levels and units. It comprises the principal administrations essential for providing support to the educational process, graduate studies, scientific research, healthcare training and services, administrations, departments, and units. As there are two sections, one for male and the other for female students, the organizational structure has a female Vice Dean for Female Section (VDFS). There are documented specifications and responsibilities for each sector in the structure as stated in the university bylaws [See Appendices File - Section I, Appendix 4 (SI-A4): "University Bylaws"]. Revisiting the job description of various sectors is ongoing to be more specific, thus ensuring objective accountability. Even though the FOM is fully funded by the government, the academic leadership headed by the dean has the capabilities of additional extra budgetary fund raising and activation of the mutual relations with the community sectors. A QAAU has been established in April 2010 under the administrative authority of the VDQD. It has clear specific responsibilities and jurisdictions. It possesses an approved, documented structure incorporated clearly in the overall organizational structure. The QAAU sat a plan for a comprehensive evaluation system that is to start in 2010/2011 which will include Faculty Annual Report assessing the effectiveness of the educational process and the extent of compliance of the institutional capacity to the national and international standards adopted by the FOM. The unit has also recently issued the Annual Evaluation Report of the Educational Program [See Appendices File - Section II, Appendix 1.4 (SII-A1.4): "Annual Evaluation Report of the Educational Program 2009/2010"].

There are specific bylaws governing the relation among the governing board. There are numerous examples of situations that require review by or approval of the governing board (Faculty Board) of the FOM such as the vision, mission, objectives, and strategic plan, curriculum map, appointment or promotion of faculty members, …etc)

The FOM selects academic leaders on the basis of objective documented criteria based on scientific activities, managerial and leadership skills, contributions in students' activities and services, participation in quality and development aspects, an academic file that shows integrity and commitment, and professional collegiality with colleagues, employees and employers. The administrative officers and faculty members of the FOM are appointed by the governing board according to the university by-laws revised on July 16, 2007. However, final approval is made centrally by the university and involves the FOM representative in the selection process.

The FOM adopts a democratic leadership style which encourages participation, and freedom of critique and innovation. In almost all aspects concerned with teaching and learning or scientific research, staff members are involved in the process of decision making through departmental meetings, and the curriculum committees for phase (I) and (II), in addition to the main curriculum committee (MCC), and finally the Faculty Board.

3. **Evaluate the relationship of the medical school to the university and clinical affiliates with respect to:**
   a. **The effectiveness of the interactions between medical school administration and university administration.**
   b. **The cohesiveness of the leadership among medical school administration, health sciences center administration, and the administration of major clinical affiliates.**

There is a direct, smooth, and open communication between the FOM and the University administration whereby the dean can directly report to the university president or vice presidents as needed.

There is a close relationship between the FOM and other Health Faculties in the university through the Health Faculties' Deans' Board. Collaboration with other Medical Faculties in KSA is maintained through regular meetings of National Council of Deans of Faculties of Medicine in KSA. Regional partnership is fulfilled via the Gulf Council of Deans of Faculties of Medicine in the Gulf Council countries (GCC).

4. **Assess the organizational stability and effectiveness of the medical school administration (dean, dean's staff). Has any personnel turnover affected medical school planning or operations? Are the number and types of medical school administrators (assistant/associate deans, other dean's staff) appropriate for efficient and effective medical school administration? Is departmental leadership stable or are vacancies rapidly replaced without detriment to departmental functioning?**

The turnover of the academic leadership embodied by the dean and vice deans, is regulated by the University's bylaws; whereby the term of appointment for the dean, vice deans and chairmen of departments is two years which could be renewed twice to avoid any detriments to institutional functioning. The continuity of leadership and promotion from one leadership position to another usually involves academic leaders who worked in the system and know its details. The former dean, Dr. Adnan A. Al-Mazroaa, worked as a Vice Dean Hospital Director (VDHD) from 2000 to 2006 then became the dean from 2006 till 2009 and thenhe was promoted to Vice President of the university. The present dean, Prof. Mahmoud S. Al-Ahwal worked as chairman of the Department of Medicine from March 2001 to August 2005, then as a Vice Dean for Clinical Affairs (VDCA) from August 2005 till July 2009 and then as the dean from July 2009 to date. The VDFS, Prof. Daad Akbar, has been in this position since 2004. The Vice Dean for Basic Sciences (VDBS), Dr. Abdulmoneim Al-Hayani, has been in this position since 2008; prior to that he was the VDQD from 2007 to 2008. This administrative stability allows for the implementation of all strategic operational objectives and follow up of all plans.

B. Academic Environment:

5. Evaluate the graduate programs in basic sciences and other disciplines, including involved departments, numbers and quality of graduate students, quality of coursework, adequacy of financial support, and overall contribution to the missions and goals of the medical schools. Describe the mechanisms for reviewing the quality of the graduate programs in basic sciences and comment on their effectiveness. Assess whether the graduate programs have an impact (positive or negative) on medical students education. Describe opportunities for interaction between medical and graduate students and the frequency of those interactions.

The FOM- KAU provides a wide variety of tracks to its graduates to continue their graduate studies. These include:

(1) Graduate Education Programs: which are provided by FOM-KAU, (a) Master's Programs (n= 6) in Anatomy, Technical Anatomy, Physiology, Pharmacology, Medical Biochemistry, and Microbiology; (b) Joint Supervision Doctoral Programs between FOM-KAU and reputable international institutions (n= 4) in Speech Pathology, Audiology, Physiology, and Hematology.

(2) Residency Training Programs which are accredited by the Saudi Commission for Health Specialties (SCHS).

(3) Scholarships which provide graduates with a variety of international opportunities that include: (a) Residency training programs in various clinical specialties ending with general board certification, (b) Fellowship training program in various clinical subspecialties ending with subspecialties board certification,

(c) Master and PhD programs.

The size of the local graduate programs compared to that offered by scholarships is relatively small; consequently, actions have been taken at the university level in the form of a formal assignment from the Vice Presidency of Graduate Studies & Scientific Research encouraging all Faculties to innovate Master's and Doctoral degrees in all scientific departments [See Appendices File – Section I, Appendix 12 (SI-A12): "Vice President's Letter"]. The FOM consequently approved three Master's Programs in Ophthalmology, Pediatrics, and Medical Genetics, and three Doctoral Programs in Pathology, Pharmacology, and Physiology.

All local and international graduate education programs are totally funded by the university; whereby the financial needs of the FOM-KAU are fully met in advance via a five year prospective plan proposed by the Faculties through the University President to the Ministry of Health where it is approved and dispensed in a time frame that is appropriate for scheduled plans. Besides the main university budget allotted to the FOM, additional funds are also secured from nine scientific chairs, three centers of excellence, and NGOs.

Graduate education programs are regularly and systematically reviewed at two levels: the Faculty, and the Graduates' levels through well-defined processes (http://graduatestudies.kau.edu.sa/); (http://sponsorships.kau.edu.sa/); (http://joint.kau.edu.sa/). At the Faculty level, regular monitoring and reviewing occurs through a "Report Cycle", whereby course reports are compiled based on evaluation results during and at the end of the course; and by completion of one complete cycle, a program report with an improvement action plan is issued to the QAAU and the Vice Dean for Graduate Studies & Scientific Research (VDGSSR). The administration of the Joint Supervision Program at the University supervises graduates' academic, financial and administrative affairs and acts as a link between the international university/supervisors and the FOM / Departments. Moreover, the Advisory Committee of Graduate Students provides constructive counseling to overcome obstacles and improve graduate studies

Quantitative indicators indicate effectiveness of the graduate education programs in the FOM.As of the first semester of the academic year 2010/2011, 140 students compared to 22 were enrolled in the Master programs in FOM-KAU and abroad, respectively. In addition, there is a steady increase in the number of students enrolled in the FOM Master programs over the last 5 years: 11 students in 2005/2006; 18 students in 2006/2007; 46 students in 2007/2008; 70 students in 2008/2009; 98 students in 2009/2010; and 140 students in 2010/2011.

Graduate studies improve the skills of graduate students who are involved in instructing medical students in tutorials, problem-solving sessions, or small group learning sessions. This has a positive impact on the education of medical students. The sixth year medical students (externs) and the interns have very close interaction with graduate students enrolled in various basic sciences or clinical disciplines, creating a friendly environment that is conducive for more efficient self directed and peer to peer learning.

6. Evaluate the impact of residency training programs and continuing medical education activities on the education of medical students. Describe any anticipated changes in graduate medical education program (number of residents, shifts in sites used for training) that may affect the education of medical students.

The size of the Residency Training Programs available for graduates is adequate with considerable opportunities for selection of programs in all specialties. KAU KAUH is an accredited training center for 20 general and subspecialties programs including: Internal Medicine, General Surgery, Pediatrics, Obstetrics/Gynecology, Family Medicine, Anesthesia, Radiology, Ophthalmology, Oto-Rhino-Laryngology, Pathology, Orthopedics, Urology, Infectious Diseases, Cardiology, Neonatology, Pulmonology, Endocrine & Metabolic Diseases, Hematology, Rheumatology, Adult Nephrology, Gynecological Oncology, and Endoscopy. All the aforementioned residency and fellowship training programs are accredited by the Saudi Commission for Health Specialties (SCHS). The (SCHS) conducts on-site visits to review and accredit all residency and fellowship training programs. Such accreditation is valid for two years after which it has to be renewed. Quality of the residency and fellowship training programs is assured through a robust evaluation system that encompasses continuous and final, as well as formative and summative assessments. At the end of each rotation in the residency or fellowship program, the trainee is evaluated by his/her direct supervisor. Trainees have to pass an annual promotional examination to be promoted from one year/level to the next. Upon completion of the training, the trainee has to pass a summative written and clinical examination to be board or subspecialty certified. Effectiveness of the residency and fellowship training programs at KAUH is evidenced by the increased enrollment of graduates in the last five years [See Appendices File – Section I, Appendix 3 (SI-A3): "Graph - Number of Graduates Enrolled in Residency and Fellowship Training Programs at KAUH"].

Graduates appointed as demonstrators in the FOM are encouraged to pursue their career of choice in developed countries such as USA, Canada, UK, and Australia.

Residents in the 3rd, 4th, and 5th levels of training and subspecialties fellows participate in teaching medical students in all clerkships at KAUH including Internal Medicine, Obstetrics/Gynecology, Pediatrics, Psychiatry, Surgery, and Family Medicine. Nevertheless, until the beginning of 2009/2010, residents and fellows were involved in teaching students without receiving training in teaching skills. Consequently, remedial actions have been taken to improve teaching skills of residents and fellows involved in teaching students. In 2009/2010, one international, and two local workshops targeting residents and fellows were organized by the Medical Education Department: “Teaching on the Run”; “Tips in Medical Education for

Residents"; and "Teaching Communication Skills for Residents". In 2010/2011, the Medical Education Department released a calendar for systematic training packages targeting residents and fellows, and new teaching staff.

Medical students have opportunities to learn about and participate in Continuous Medical Education (CME) activities. They are entitled to register in any of the following optional programs: CSC programs for developing & enhancing their clinical skills; and CME courses and activities held by the Continuous Medical Education Unit under the VDGSSR. In addition, medical students receive obligatory two courses: the basic life support (BLS) course in the 2nd year which must be renewed every 3 years, and an Internship Orientation course for all interns. In collaboration with the American Heart Association, the FOM has recently proposed that medical students in the clinical years at the FOM must have an Advanced Cardiac Life Support (ACLS) course and be ACLS-certified before they can start the internship year. This proposal is currently under evaluation by the Curriculum Committee.

7. Evaluate research activities of the faculty as a whole, including areas of emphasis and level of commitment, quality, and quantity in the context of the school's missions and goals.

Scientific research is one of the university's strategic objectives that took priority in the first strategic (from 2007-2012) as well as the second strategic plan (2013-2017). Consequently, the university endeavours to secure a convenient environment and resources essential for conducting interdisciplinary research of high quality. The FOM is keen to align its strategic plan and mission with that of the university. The main goal of the university first strategic plan (2007/2011) was "Academic Advancement" and among its strategic objectives were introduction of research methodology in undergraduate educational programs, consolidation of research infrastructure via increasing fund for research by 10% each year starting 2008/2009 for 3 years, and taking the initiative of "Researcher Development" through training and joint research with international institutions. To align further with the university plan, the FOM established a Research Ethics Unit with an approved "Code for Research Ethics". In 2010 the FOM organized two workshops on research ethics by Harvard School of Medicine and another one on how to publish a scientific paper in high impact journals.

The fifth goal in the university's second strategic plan is to be the "top university in scientific research as regards quality and quantity in the Arab countries according to international classifications". Each faculty member is expected to produce at least one scientific work annually; publishing at least 50% of the scientific papers of faculty members in internationally classified journals (ISI). Each Faculty at King Abdulaziz University, including the FOM, is requested to organize at least one conference or scientific symposium annually. The strategy also includes establishment of strategic partnerships with internationally renowned scientific and research institutions such as Harvard School of Medicine so as to contribute to development of scientific environment, infrastructure, research outcomes and postgraduate studies programs in accordance with international standards. As a result, the FOM intended to put a "Research Plan" starting from (2013) in its second strategic plan (2013-2017); apply the "Faculty Members' Research Map" to trace level of productivity of research for each faculty member; and increase the incentives for faculty members via funding the publication in international journals; and participation in international conferences. Establishment of Clinical Research Unit in collaboration with Harvard School of Medicine is currently underway.

The number of published research in peer reviewed journals over the last 2 academic years was 169 papers from eight basic sciences departments (21 papers per basic science department), 288 papers from 13 clinical departments (22 papers per clinical department) and 12 papers from the Medical Education Department. The number of research papers orally presented in local and international conferences was 25 papers in 2008/2009 and 29 papers in 2009/2010.

8. Assess the adequacy of the resources (equipment, space, graduate students) for research. Evaluate any trends in the amount of intramural support for research and the level of assistance to faculty members in securing extramural support.

Research funding is secured from various funding sources. The university allocates a separate budget for research to Faculty members. Intramural research funds come from the following sources: the University Deanship of Postgraduate Affairs, the Research and Consultation Institute, the scientific chairs (to date 9 chairs), and Centers of Excellence (to date 3 centers). The Ministry of Higher Education also provides extra-budgetary funds for approved Developmental Projects. The Center for Research and Consultation at the University assists faculty members to secure extramural research funds from various sectors such as King Abdulaziz City for Science and Technology, governmental and private sectors, and non-profit organizations. The center also supports faculties who want to establish Scientific Chairs or Centers of Excellence through communication and advertisement of their research projects to the appropriate parties.

- Nine Scientific Chairs are currently available to conduct research in specialized fields as follows:
  - Sheikh Mohammed Hussein Al Amoudi Chair for Viral Hemorrhagic Fever
  - Colorectal Cancer Chair
  - Sheikh Mohammed Hussein Al Amoudi Chair for Diabetic Foot Research
  - Sheikh Mohammed Hussein Al Amoudi Chair for Breast Cancer
  - Sheikh Mohammed Hussein Al Amoudi Chair for Biomedical Practice Ethics
  - Salem Bugshan Chair for Alzheimer's Disease
  - Ahmad Hasan Fetaihi Chair for Prostate Disease Research
  - Abdullah & Saeed Bin Zager Chair for AIDS Research & Control
  - Alzamil Chair for Cancer Research
- Three Centers of Excellence have also been established, namely:
  - Center of Excellence for Osteoporosis Research (CEOR) at King Fahad Research Center (http://ceor.kau.edu.sa).
  - Princess Aljawhara Center for Excellence in Research of Hereditary Disorders (http://al-jawhara-center.kau.edu.sa).
  - Sheikh Mohammed Hussein Al-Amoudi Center of Excellence in Breast Cancer (http://alamoudi-breastcenter.kau.edu.sa)

King Fahad Medical Research Center has been established in 1980 to provide financial, technical, and logistical resources to conduct medical research. These resources include 18 highly equipped laboratories, Special Infectious Agents Unit that has a biosafety level 3 microbiology laboratory for special infectious pathogens, Clinical Trial Unit, Hematology Research Unit, Genome Unit, electron microscopy unit, gene sequencers, animal house, animal operation room, a library, class rooms, and a large auditorium. The research plan in this center comprises five core research areas based on community needs which include: infectious diseases, metabolic diseases, cancer, genome, and nutrition.

Establishment of a centralized research data base for faculty members has recently been initiated to serve as an objective indicator for measuring and evaluating the competence of the research process. This data base is helpful in determining the following indicators: percentage of joint scientific research with international scientific institutions, number of faculty members who won national or international prizes for their research activities, and the number of applied researches utilized by service institutions in the community.

The university motivates faculty members to conduct research and publish their papers in reputable international journals with high impact factor through monetary rewards of up to SR 500,000.00 (US$ 133,000.00). The faculty also encourages and fully sponsors faculty members to present their research in national and international conferences.

The university and FOM have also provided faculty members training courses on research methodology. For instance, in 2009/2010, three international workshops with Harvard School of Medicine, and two local workshops were offered to faculty members. Additionally, the Center for Teaching, Learning, and Development (CTLD) (http://ctld.kau.edu.sa/) at the university offers many courses to improve research skills.

9. Assess the impact of research activities on the education of medical students, including opportunities for medical student participation in research.

All undergraduate medical students are taught the principles of conducting research. Until 2009, the 4th year medical students had to participate in an annual survey research held by the Family & Community Medicine Department over a two week period. After 2009, as a result of the curriculum reform and development and based on feedback from students and faculty members, the annual survey was rescinded. Students are currently offered more opportunities to conduct research with faculty members particularly during the elective period in the 4th year (for 2 weeks), 5th year (for 2 weeks), and 7th (internship) year (for 2 months). To encourage students to conduct research, the FOM has revised the requirements for appointment of graduates as demonstrators to include research whereby a weight of 10% in the final assessment score is given to participation in published research.

Medical students have many opportunities to participate in research. Centers of Excellence provide students ample opportunities to conduct clinical research with financial incentives. One of the most successful undergraduate research programs is the "Youth Development Program" sponsored and supervised by the CEOR at King Fahd Research Center (http://ceor.kau.edu.sa). This program started in 6/10/2009, and a contract was signed by the dean of the FOM and the Director of the CEOR and the participating students [See Appendices File – Section I, Appendix 2 (SI-A2): "List of research projects of CEOR in which students are involved"].

The first batch of the program included 30 research projects in which 54 students participated. Faculty members supervise students during the research. Finally a contest is held to select the best three researches and students are offered financial prizes in addition to providing them an opportunity to present their research in the annual CEOR International Symposium. Additionally, students work with Master and PhD students in an environment conducive for scientific thinking and collaborative work.

Medical students also have other opportunities to conduct research through the annual survey studies held by the Family & Community Medicine Department. In 2009/2010, three surveys were held: the "Premarital Screening in the Saudi Society" in which 100% of the medical students participated. In the Early Clinical Experience and Communication Skills (ECECS) module in the 3rd year, 345 students were taught how to write research proposals. In addition, students are offered opportunities to participate in research held by individual departments and modules

Students also participate in the following regular events:

1. Gulf Council Countries (GCC) Medical Students' Annual Conference.
2. Saudi International Medical Education Conference.
3. Research Club Annual Symposium: organized by undergraduate students with medical staff in the last three years.

Students' research is funded through grants from non-governmental organizations (NGOs) such as ZAMZAM organization and Centers of Excellence (contracts). Students are informed about research opportunities through posters, brochures, departments' websites, Centers of Excellence, and Students' Research Club.

Students are informed about research opportunities through posters; brochures; departments' websites; Centers of Excellence; Students' Research Club; and KAU Teaching Hospital.

Students from all grades participate voluntarily in many community services teams such as: Cancer team; Diabetes Team; Pilgrimage Team and Medical caravans. Budget for these activities is supplied via charity and grants as well as by NGOs; while caravans, in addition are supported by the teaching hospital. Service learning activities are actually optional and voluntary. They are funded by charities from external organizations as (Zamzam; International Aid Agency; International Islamic Youth Symposium).

Moreover, students experience service learning through the Centers of Excellence as:

a. Center of Excellence for Osteoporosis Research: via the "Awareness Outreach Program"
b. Princess AlJawhara Center for Excellence in Research of Hereditary Disorders
c. Sheikh Mohammed Hussein Al-Amoudi Center of Excellence in Breast Cancer

10. Describe programmatic and institutional goals for diversity. Evaluate the success of the medical school in achieving its goals for appropriate diversity among its students, faculty, and staff. Are there recruitment and support programs appropriate for the school's diversity goals? Describe how well institutional diversity contributes to the educational environment and prepares students for meeting the health care needs of a diverse society.

The society in Saudi Arabia is cosmopolitan with diverse races and ethnic origins. The ethnic origin of the Saudi citizens is also diverse and includes Arabs from the Arabian Peninsula as well as from all other Arab countries, Asians, Turkish, Indians, Africans, Persians, and others. As Muslims, Saudi Arabians participate in a community in which issues of race, ethnicity, and national origin should be of no significance and never form the basis for social action, political behaviour, economic organization, or admission to universities. Generally, the cultural and ethnic diversity at the FOM reflects the diversity of Saudi Arabia. Since higher education in Saudi Arabia, including the Medicine, is free of charge, all students, regardless of their social or financial status, have equal opportunities to enroll into the FOM. Further, the stipends (SR1000) given monthly to all university students encourage academically competent students who are underprivileged to enroll into the FOM. There is a marked shortage of national doctors who currently account for only 19% of doctors working in Saudi Arabia. Because of this great need for Saudi doctors, by and large, only Saudi nationals are admitted to the faculties of medicine in Saudi Arabia. However, a small percentage (usually <5%) of non-Saudi nationals are accepted including students of Saudi mothers/non-Saudi fathers, students on scholarships sponsored by Gulf Council Countries (GCC), and non-Saudi students admitted by Royal Command. Non-Saudi students receive the same financial incentives during their study and they follow the same admission rules as their peer Saudis. There is no tracking in the curriculum between both categories of students. The approximate ratio of Saudi to non-Saudi students is 25:1. As regards gender, the male to female students ratio enrolled in the program is 1:1.

The university bylaws contain sections for faculty members, employees, and hospital staff on a contract term who are usually non-Saudis; they address codes for financial affairs, recruitment, employment, and retention. Regarding nationality, both Saudis and Non-Saudis are treated similarly as regards laws, rules, and work load. There are no rules concerning religious aspect, gender, race, or cultural or socio-economic background. Bylaws are mounted on the University website and available in all the Cultural Attachés of the Kingdom of Saudi Arabia. They are also available in the University Bylaws Handbook.

II. EDUCATIONAL PROGRAM FOR THE MBBS DEGREE

A. Educational Objectives

1. Describe the level of understanding of the school-wide objectives for the educational program among administrators, faculty members, students, and others in the medical education community. Do these objectives serve as effective guides for educational program planning and for student and program evaluation?

The ILOs of the undergraduate medical program, were formulated in 2003 by a Curriculum Development Task Group that was assigned to develop and improve the quality of teaching and learning environments of the faculty in relation to: curriculum reforms and development, students support, development of faculty members, development of resources and facilities, as well provision of high quality healthcare to the community. These (ILOs) were specified and reformulated in 2009 to comply with international Academic Reference Standards adopted from the outlines of the Quality Assurance Agency (QAA), 2002. The program objectives secure the fulfillment of the intended graduates' attributes which are adopted from Tomorrow's Doctor, 2003 and 2009. These objectives conform with the required qualifications of graduates set by the National Qualifications Framework for Post-Secondary Education in The Kingdom of Saudi Arabia, (July, 2006); [See Appendices File – Section II, Appendix 1 (SII-A1): "Program File"].

The program ILOs conform to its mission which states that; "The Faculty of Medicine at King Abdulaziz University, is committed to provide high-quality educational program to undergraduate students; that equips them with knowledge, skills and Islamic ethics, laws and attitudes; which enables graduates to make a valuable contribution in primary, secondary, and tertiary healthcare services; and reinforces graduates to take the best advantage in the labor market." These ILOs are consistent with the five domains of learning listed in the National Committee for Academic Accreditation and Assessment (NCAAA) templates [See Appendices File – Section II, Appendix 1 (SII-A1): "Program File"].

The program ILOs were distributed to the coordinators of all core courses and system-based modules to be discussed in their committees; followed by selection of the ILOs which are covered by their courses/modules. The selected ILOs served as the guideline for course/module committees to align their course/module learning objectives to the instruction and assessment strategies. A program matrix is then plotted to check horizontal and vertical relation between courses, determine extent of coverage of the program's ILOs, and detect redundancies or deficiencies. It served as a guide for evaluating the design of the program with an aim of achieving program compactness [See Appendices File – Section II, Appendix 1 (SII-A1): "Program File"]. The program and courses specifications were discussed in the Main Curriculum Committee and approved in the Faculty Board meeting (#2) on 8 November 2009, which was then ratified by the University President on 1/12/1430 H (17 November 2009). It was then publicized by being uploaded on the FOM website and QAAU website. The program's ILOs are also included in the first part of the study guides of all courses, system-based modules, and clerkships.

The ILOs of the courses and modules were formulated in light of the program's ILOs. Weights of ILOs in different domains are the axis for plotting examinations blueprints to ensure fulfillment of content and construct validity of their results. The FOM organized many national and international training workshops for proper assessment practice which included exam blueprinting and defining the validity and reliability of its results. From 2008 to 2010, the Medical Education Department organized five workshops for assessment; three given by the University of Illinois, Chicago and two by national experts. The Department of Medical Education also carried out orientation sessions to all departments' boards and modules committees. The "Teaching Learning Development Center" of the university carried out two workshops for improving the

assessment in this period. The QAAU conducted a survey to measure the appropriateness and the quality assurance measures of the assessment practice in the FOM. The response rate was 100%, and the percentage of courses which practiced exam blueprinting was (75%) [See Appendices File – Section II, Appendix 1.4 (SII-A1.4): "Annual Educational Program Evaluation Report 2009/2010"].

Program's ILOs also served as a guide for program evaluation. In 2008/2009 students evaluated the courses generally using a standardized questionnaire prepared by the Curriculum Monitoring Committee. Additionally, the whole program was evaluated by graduates of the FOM using a "Graduate Questionnaire" offered to the interns. The QAAU, which was established in April 2010, started triangulating the evidence derived from evaluating the program and its courses. This has been achieved through differentiating evaluation into its component parts besides the aforementioned general questionnaire, whereby another questionnaire containing the course ILOs is used to measure the extent of achievement of these objectives as perceived by the students. Objectives which demonstrated poor satisfaction index are highlighted to the course coordinators for revision. A similar questionnaire is distributed to the faculty members to evaluate their perception of the extent of fulfillment of the course objectives and the appropriateness of teaching strategies including integration, problem-solving, and self-directed learning (SDL). In 2010/2011, another questionnaire is utilized to give the students opportunities to evaluate the faculty members with regards to their coverage of the objectives, their teaching & assessment strategies and whether they serve accomplishing the objectives. Additionally, the matriculation rate from the 6th (final) year over the last five years (87% in 2006; 81% in 2007; 91% in 2008; 90% in 2009; and 97% in 2010) was compared to the previous years (87% in 2002; 81% in 2003; 82% in 2004; and 83% in 2005) as a measurable indicator to evaluate the program. The improvement in the matriculation rate from the 6th year in the last five years may be explained by the increased awareness of the program ILOs as a guide for instruction and assessment and the practice of exam blueprinting. The results of all of these evaluation strategies that are guided by the program objectives are used to prepare courses and program reports to develop improvement action plans which are consequently used to improve the program. Thus, the program evaluation-based improvement is guided by the program objectives [See Appendices File – Section II, Appendix 1.4 (SII-A1.4): "Annual Educational Program Evaluation Report 2009/2010"].

2. Comment on the extent to which school-wide educational objectives are linked to physician competencies expected by the medical profession and the public. Summarize results from any associated outcome measures that demonstrate how well students are being prepared for the next stage of their training.

The educational program possesses attributes and characteristics that distinguish it from its counterparts and emphasize its competitive stance. The attributes of the program take into account the General Medical Council's Standards for Medical Education: Tomorrow's Doctors (GMC, 2003 and 2009) [See Appendices File – Section II, Appendix 1 (SII-A1): "Program File"].

The program defines clearly the graduate attributes which include: practice and maintenance of good standards of clinical care and professional communication, establishment of good relationships with patients, colleagues, and senior and junior staff, acquisition of teaching and training skills, life-long learning attitude, humbleness, punctuality, and honesty. Graduates' attributes are compatible with community needs and employability skills required in the medical field practice as well as with the National Qualifications Framework set by the Saudi Commission for Health Specialties, [See Appendices File – Section II, Appendix 1 (SII-A1): "Program File"].

Graduates' attributes were set by the Curriculum Development Task Group in 2003. Those attributes were revisited in 2008 leading to infusion of new courses and topics. For example: in order to ensure practicing good standards of clinical care and making sure that patients are not put at unnecessary risk, a simulated

environment in the CSC is used. Preparation for a project on using standardized and simulated patients in clinical teaching, training and evaluation is ongoing. Moreover, a topic on "Patients' Safety" is included in the ECECS module in the 3rd year (in phase-1) of the curriculum, with a more specialized course, called "Doctor-Patient Safety", proposed to be given to students in the 6th year as part of the Internal Medicine clerkship as of the next academic year. Doctor-patient relationship is addressed in the clerkship rotations and earlier in several courses such as communication skills, Biomedical Ethics (Professionalism), and psychiatry.

In order to keep the graduates up to date with developments in their field and maintain their skills, a topic on evidence-based medicine (EBM) is addressed in the Community Medicine course. A more detailed course on EBM is also offered as an elective special study module for 2 weeks in the 4th year. Additionally, specialized elective courses on EBM, and continuous medical education courses are provided by the Continuous Medical Education Unit.

Moreover, the design of the program informed by the adopted academic reference standards and employability requirements in the national healthcare community, demonstrates how the program provision is interrelated so that each phase lead to the other and links competencies expected by the medical profession and the public. Foundation Course in the 3rd semester prepares students to all core courses and system-based modules in Phase-I. Other courses in phases I lay down a solid foundation for the subsequent full-time clinical study in Phase-II. This foundation includes knowledge, skills and attitudes, [See Appendices File – Section II, Appendix 1.5 (SII-A1.5): "Curriculum Relations Map"]. For example: All system-based modules in 4th (year 2) and 6th semesters (year 3) in Phase-I prepare students for Phase-II clerkships in Otorhinolaryngology, Ophthalmology, Pediatrics, Family Medicine, Obstetrics/Gynecology, Internal Medicine, and Surgery. The Basic Emergency Care course in the 4th semester (year 2) in Phase-I lays the foundation for Clinical Skills Module, Anesthesia, and Accident & Emergency courses in Phase-II. The ECECS module in the 5th semester (year 3) in Phase-I allows students to explore the healthcare system and relates to the Medical Ethics and Patient Safety Courses in Phase-II. Medical Genetics Course in 5th semester (year 3) in Phase-I relates to Pediatrics clerkship in Phase-II.

Further, courses within Phase-II prepare for each other whereby Clinical Skills Module in the 4th year prepares students for their learning and training in all clerkships including Family & Community Medicine, Otorhinolaryngology, Ophthalmology, Pediatrics, Anesthesia, Family Medicine, Obstetrics/Gynecology, Internal Medicine, and Surgery. Similarly, all clerkships in Phase-II prepare students for their training in the internship year which, in turn, prepares graduates for their residency program.

Students rotate in different sectors of healthcare to develop competencies required later during practice, e. g. hospital-based inpatient and outpatient services, maternal and child health clinics, community outpatient clinics, general practice clinics, and emergency department in the various available facilities in Jeddah. During a particular rotation in the hospital, students rotate through different sections of the specialty, e.g. during the pediatric rotation; students rotate through general pediatrics, pediatric infectious diseases, pediatric oncology, and neonatology units. Logbooks contain a list of the conditions that the students are expected to encounter and the skills they are expected to learn during that particular rotation.

The outcome measures that demonstrate how well students are being prepared for the next stage of their training include the clerkships evaluation questionnaire, the graduation questionnaire, and the performance of the graduates in the national licensing examination of the Saudi Commission for Health Specialties In the academic years 2008/2009, 2009/2010, 62% and 75% of the graduates, respectively, felt confident that they have acquired the clinical skills required to begin a residency program. Graduates' evaluation questionnaire revealed that 83% of the students rated their educational experience as at least good in the Internal Medicine clerkship, and 81% of the students rated their educational experience as at least good in the Surgery clerkship.

Comparison of these results with those in 2009/2010 reveals that there is progress in the satisfaction of students at their preparation throughout the program for the next stage of their training. The graduates of the FOM usually perform the best in the Licensing Examination conducted by the Saudi Commission for Health Specialties [See Appendices File – Section II, Appendix 24 (SII-A24): "Licensing examination scores of all medical graduates in Saudi Arabia for 2008-2010"].

3. Comment on the effectiveness of the mechanisms in place for assuring that all students encounter the Specified types of patients/clinical conditions needed for the clinical objectives to be met.

Clerkships defined the types and number of patients needed to meet the clinical objectives. There is a well-defined mechanism for initial selection of the types of patients or clinical conditions based on specific validated criteria including: commonness, prevalence, seriousness, morbidity & mortality,…etc [See Appendices File – Section II, Appendix 2.3 (SII-A2.3): "Prioritization check list for selection of clinical cases"]. Prioritization is then performed and the key clinical cases are listed in a format that demonstrates the types of and required number of exposure to clinical cases. The list of key clinical cases approved by the respective clinical department is sent to the office of the VDCA to be displayed and distributed to students. Log books are used by departments to ascertain that all students are exposed to all required cases essential to meet the clinical objectives of the clerkship.

Based on the overall clerkship evaluation questionnaires, 91% of the students agreed that the assigned types of clinical cases are adequately available, and 87% of them agreed that their number is adequate in the teaching hospital.

Students, however, who do not encounter patients with a particular condition, are able to remedy the gap by a simulated experience in the CSC. Ninety three to ninety six percent of the students agreed that the CSC is very well equipped and helps them to be exposed to clinical cases that they miss and also helps them to do peer to peer training. Identification of and remedial actions to treat gaps in the clinical cases encountered by students occur at departmental levels. For example in the Obstetrics & Gynecology students meet the coordinator in the the middle of the rotation to identify the gaps and define the remedial actions. In the department of Medicine and Surgery, the log book is used to spot any gaps by the coordinator. Due to the great variety and number of clinical cases encountered at KAUH and other affiliated teaching hospitals, students usually do remedy their gaps before the end of the rotation.

B. Structure of the Educational Program

1. Delineate the mechanisms ensuring that the educational program provides a general professional education that prepares students for all career options in medicine. Cite relevant outcomes indicating success in that preparation.

The planning and continuous periodic review process ensures that the educational program provides a general professional education that prepares students for all career options in medicine. The recently developed hybrid system-based curriculum consists of: a university foundation year (first year) weighing 27 credit hours; Phase-I (second and third year) weighing 92 credit hours, and Phase-II (fourth, fifth, and sixth yearsweighing 142 credit hours, totaling 261 credit hours, in addition to the internship year. On planning the curriculum, a balance between the knowledge, skills, and attitudes components is observed in order to ensure the production of physicians who master the attributes stated in the program and hence qualify them for all career options in medicine.

The program encompasses all basic medical sciences core courses (General Anatomy, Cells & Tissues, Embryology, Biochemical Basis of Medicine, Pathology, Medical Microbiology, and Medical Pharmacology); system-based modules (Musculoskeletal, Immune-Blood-Lymph, Cardiovascular, Respiratory, Urinary, Gastrointestinal, Nervous system & Special Senses, Reproductive, and Nutrition & Metabolism); core clerkships (Pediatrics, Obstetrics & Gynecology, Internal Medicine, and Surgery); as well as subspecialties, and special clinical modules (Medical Genetics, Clinical Skills Module, Basic Imaging, Laboratory Medicine, Forensic Medicine, Community Medicine, Otorhinolaryngology, Ophthalmology, Anesthesia, Family Medicine, Patient Safety, and Accident & Emergency); Biomedical Ethics (Professionalism), (Foundation Course, ECECS module, Medical Ethics, and Psychiatry), all of which are essential for preparing students for all career options. Clinical Electives and many Special Study modules are also offered to students in the fourth and fifth years (Phase-II), 2 weeks and 2 credit hours each, to allow self directed in-depth learning and exploration of various basic science and clinical fields to assist students in choosing their career and/or remedy any deficiency in a student-selected subject or specialty. Elective modules also offer students opportunities to acquire research abilities, enhance their skills in collection, evaluation, synthesis and presentation of evidence, and to participate in community services. Additional 8 weeks of electives are also offered to students in the internship year (the 7th year of the program). Thus, the total period of electives mounts to 12 weeks (8%) out of the 148 instructions weeks in the 4th to the 7th clerkship years. The content of the program is comprehensive, interrelated, and conforming to the program objectives, expected graduates' attributes, and employability skills required in the healthcare market [See Appendices File – Section II, Appendix 1 (SII-A1): "Program File"] and [See Appendices File – Section II, Appendix 3 (SII-A3): "Curriculum Map"]. The planning of the sequence of courses within the program, originally scrutinized by the QAAU will be evaluated and included in the Annual Educational Program Evaluation Report. Results are discussed in the MCC, and decisions taken aiming at developmental changes which ultimately lead to improvement of the provision. The QAAU, established in April 2010, issued the first annual evaluation report in December 2010 which is part of a comprehensive evaluation plan set by the unit for implementation in the academic year 2010/2011 [See Appendices File – Section II, Appendix 1.4 (SII-A1.4): "Annual Educational Program Evaluation Report 2009/2010"].

The MCC reviewed this report in January 2011 and concluded that even though the courses were interrelated and intended to prepare students to the subsequent phase of learning and training as indicated by the curriculum relations map, yet the sequencing of the core courses in relation to the system-based modules requires reconsideration to achieve the expected objectives from the core courses in terms of filling the knowledge gaps in the system-based modules. In addition, the position of the Medical Genetics Course in

Phase-I was also questioned with a suggestion that it be shifted to Phase-II. Otherwise, sequencing of courses was justified; [See Appendices File – Section II, Appendix 1.5 (SII-A1.5): "Curriculum Relations Map"]. Before, establishment of the QAAU, the Curriculum Monitoring Committee monitored the design of the program. The Curriculum Monitoring Committee revised the program specifications to ensure conformity to the standards of the National Commission for Academic Accreditation & Assessment (NCAAA). As a result, the committee recommnded adding "Patient Safety" and "Basics of Research Methodology" to the "ECECS" module in Phase-I. Delineate the mechanisms ensuring that the educational program provides a general professional education that prepares students for all career options in medicine. Cite relevant outcomes indicating success in that preparation.

The first batch of students enrolled in the new hybrid system based curriculum will graduate in 2012 when assessment of the outcome will be possible. The progressive increase in the number of graduates enrolled in various postgraduate studies (Master and Joint Doctoral programs) and accredited residency training programs in all clinical specialties is an indicator of successful outcomes of the old curriculum.

2. Evaluate the adequacy of instructional opportunities for students to engage in active learning and independent study. How well does the program prepare students to engage in self-assessment of their learning needs and to develop other skills to support habits of lifelong learning?

The instructional opportunities for students to engage in active learning and independent study are reasonably adequate and secured through a variety of methods including allotted time (5% of the total teaching hours in Phase-I and 3% of Phase-II) for self directed learning (SDL), PBL sessions, tutorials, electives, allotted time for clerking in clerkship years, logbooks, research tasks, and EBM assignments [See Appendices File – Section II, Appendix 1.4 (SII-A1.4): "Annual Educational Program Evaluation Report 2009/2010"].

SDL is monitored through different methods such as oral presentation of a topic related to the subject under discussion in ECECS module (3rd year), and Forensic Medicine Course (4th year), or through the use of logbooks to document SDL activities as occurs in the Community Medicine Course, and ORL course (4th year), Surgery courses (5th and 6th years), and Pediatrics (5th year). In some courses SDL is monitored through assigning research topics to groups of students; the topics are then orally presented and discussed e.g.: the nutrition and metabolism module. To enhance lifelong learning through research activities, research methodology has been added to the "ECECS" module in the form of 4 lectures (how to write a research proposal, types of variables, types of the epidemiological studies, and evidence based medicine) and two practical sessions (how to do sound internet search and how to use "PubMed".

Despite the aforementioned opportunities, students' perception of being prepared for life-long learning through SDL in Phase-I was not satisfactory; 67% of the students agreed that they were not motivated to SDL by the instructors. Additionally, focus group discussions with the students and staff revealed that SDL was challenged by the inadequate time available for students to have SDL during the scheduled time. Further, some faculty members sometimes used the time allotted for tutorials to give didactic sessions to cover topics that were covered in the lectures.

3. Evaluate the adequacy of the system for ensuring consistency of educational quality and of student evaluation when students learn at alternative sites within a course or clerkship.

In addition to the main teaching hospital of King Abdulaziz University, the FOM utilizes various other teaching sites including Ministry of Health facilities (King Fahad General Hospital, King Abdul Aziz Hospital & Oncology Center, Maternity and Children Hospital, Mental Health Hospital, and primary health care centers), King Khalid National Guard Hospital and primary health care centers, King Fahad Armed Forces Hospital, and King Faisal Specialist Hospital and Research Center. Agreements of affiliation demonstrate terms of reference that specify the role of the main and affiliated hospitals in the educational process as regards consistency of topics and their objectives. Teaching and evaluation of the 4th, 5th, and 6th year students in these affiliated hospitals is carried out by faculty members from the main campus, whereas training and evaluation of the interns in these affiliated hospitals is carried out by their own staff who are made aware of the learning objectives and evaluation technique for each internship rotation to ensure consistency with the main campus. Thus, the main campus ensures that the overall quality of teaching and evaluation in various teaching sites is similar. The clerkship/course specifications are publicized among faculty members teaching in various teaching sites to ensure consistency of education. As a result of the steady expansion of KAUH reaching in year 2010 up to 704 inpatient beds (expandable to 847 beds) and 136 ambulatory beds and the presence of fully equipped CSC, the departments of Internal Medicine, Surgery, and Obstetrics & Gynecology, have been teaching 4th, 5th, and 6th year students only at KAUH commencing 2010. However, the Pediatrics and Psychiatry clerkships still use the Maternity & Children Hospital (Ministry of Health), and Mental Health Hospital (Ministry of Health), respectively, for better exposure to clinical cases. However, teaching and evaluation are conducted by faculty members from the main campus to ensure equal opportunities of quality of teaching and assessment among students.

The number of patients who serve as teaching cases and the extent of exposure to bedside teaching for each student are similar in various teaching sites; where the ratio of exposure of students to teaching beds in different teaching sites ranges from 2-3 beds per student per day for any clinical rotation.

4. Comment on how well all content areas required for accreditation are addressed in the curriculum. How confident is the educational program leadership that these topics are appropriately addressed?

The curriculum has been comprehensively reviewed three times: first in 1988, second in 2003, and the third in 2009. Changes, when appropriate, were made in the curriculum to fulfill the required outcomes and attributes. Planning for review and implementing changes is achieved based on information collected from literature, evaluation reports, faculty members, medical students, visits to other medical schools, and as part of preparation for national accreditation by the NCAAA and international recognition by the LCME. Additionally, there is a systematic routine review of courses and the program through a report cycle starting with annual course reports based on students' performance scores and evaluation questionnaires and an annual program report based on the course reports and the graduates' questionnaire and finally a comprehensive annual educational program evaluation report [See Appendices File – Section II, Appendix 1.4 (SII-A1.4): "Annual Educational Program Evaluation Report 2009/2010"]. The review processes evaluated three aspects of the curriculum content [See Appendices File – Section II, Appendix 3 (SII-A3): "Curriculum Map"] and [See Appendices File – Section II, Appendix 1.5 (SII-A1.5): "Curriculum Relations Map"].

1. Foundation year. Since 2006-2007, all students enrolled from the high school have to do a common year known as "Foundation Year". Students in this foundation year have to choose one of two paths: first is the Science Path for students who would like to join science-related faculties such as the FOM, Faculty of Dentistry, Faculty of Pharmacy, Faculty of Applied Medical Sciences, Faculty of Nursing,

Faculty of Science, Faculty of Engineering, and others; second is the Literature and administrative path for students who would like to join literature- or administration-related faculties. The courses of the sientific path in this year, including English language, biology, chemistry, mathematics, statistics, communication skills, and computer science, are delivered to the first year students outside the FOM campus. The best students passing this year are eligible to enrol into the FOM as second year medical students. Deficiencies identified in second year medical students who matriculated from the foundation year were traced to teaching of the medicine-specific preparatory courses by non-medical faculties outside the campus. To resolve these deficiencies, a "Foundation Course" delivered by the FOM was introduced in the 2nd year to prime students to the medical field. Additionally, the FOM revised all courses given to students in this year and made essential changes to ensure better preparation of the students for the medical curriculum.

2. Core medical courses include anatomy, cell & tissue, embryology, biochemistry, microbiology, parasitology, immunology, pathology, pharmacology, and preventive medicine. Physiology is completely integrated into the organ-system modules; and preventive medicine is delivered as a main objective in the community medicine course in the 4th year in Phase-II. The remaining core courses were revised as regards instructional weight and content guided by an assessment conducted by the FOM to identify and define redundancies or deficiencies and the corrective actions were undertaken by the Main Curriculum Committee.
3. Organ-System modules as musculoskeletal, immune-blood-lymph, cardiovascular, respiratory, renal-urinary, gastro-intestinal, central nervous system & special senses, endocrine, reproductive, and nutrition-metabolism modules. These modules demonstrate both horizontal and vertical integration between basic and clinical sciences by using instructional tools as PBL sessions designed around a clinical problem during each module to ensure integration of the module contents. Both core medical courses and organ-system modules are delivered in the 2nd and 3rd years in Phase-I of the program.
4. Preparatory courses and modules are delivered in the 4th year to prepare students for the main clerkships in the 5th and 6th years. They include: "Clinical Skills Module" (20 credit hours) to teach essential clinical and procedural skills, laboratory medicine, basic imaging, forensic medicine and toxicology, and electives and special study modules.
5. Main clinical clerkships as:

   - Pediatrics, and Obstetrics-Gynecology are delivered in the 5th year. Other clinical specialties as anesthesia-critical care, psychiatry, and family medicine courses have been included to fulfill the required domains of knowledge, skills and attitudes of the students. ‘Special Study’ modules and Electives were introduced to the 4th and 5th year students. The elective period in the internship has been increased to 2 months.

   - Internal medicine, and surgery, are delivered in the 6th year. As a result of regular review of the international attributes of doctors, "Patient Safety" and "Accident & Emergency Care" courses have been added in the 6th year.

6. Behavioral/ Ethical/Communication topics and courses have been introduced in the ECECS module in the 3rd year (Phase-I) and the Biomedical Ethics (Professionalism) Course in the 4th year (Phase-II). Emergency Medicine is covered along the curriculum in many courses as: "Basic emergency care" in the 2nd year; "Accident & Emergency" in the 6th year, "Anaesthesia & Intensive care" in the 5th year, and emergencies in clinical specialties and subspecialties throughout Phase-II. The whole package weighs more than 3 credit hours.
7. Geriatrics is represented in the curriculum and tackled in diseases related to old age in different clerkships.

8. Research is primarily tackled in the community medicine course. Learning objectives related to research from (b10 to b15) in the program specifications are implemented to equip graduates with the understanding of the basic principles & ethics of clinical research and how it is conducted. This is evident in the following courses: Introduction to research methodology in the Foundation Course in the 2nd year (3rd semester), Biochemical Basis of Medicine Course in the 2nd year (3rd semester), ECECS module in the 3rd year (5th semester). Research ethics are taught in the Medical Ethics Course in the 4th year (7th semester), elective modules in the 4th and 5th years. Actual conduct of research takes place through extracurricular activities throughout their undergraduate study and internship via the Students' Research Club and Centers of Excellence at King Fahd Center for Medical Research, as for example the CEOR in which a well designed research program known as "Youth Development Program" was started in 2009 and enrolled 54 students for 30 research projects. Students also get an opportunity to conduct research in the Nutrition & Metabolism Course in the 3rd year (6th semester).
9. Other requirements are delivered as topics integrated in main courses and modules throughout the curriculum including topics recommended by LCME such as complementary/alternative medicine, global health issues, healthcare financing, healthcare quality improvement, health disparities, medical informatics, medical socioeconomics, and population-based medicine, some of which have been added to the Community Medicine course in 2010. Other topics such as substance abuse have been included in the forensic medicine and psychiatry courses. Medical jurisprudence is covered in the Medical Bioethics course. Pain management and palliative care is included in the Anaesthesia and Intensive Care course.

5. Assess the balance between inpatient and ambulatory teaching and the appropriateness of the teaching sites used for required clinical experiences.

Students receive their clerkships training in both ambulatory and inpatient settings. All clerkships provide ambulatory care exposure to varying degrees. The "Family Medicine Module" in the 5th year (7 Credit hours in 5 weeks) is entirely based on ambulatory teaching in the General and Family Medicine Clinics at KAUH and primary health care centers. All other clerkship courses (Medicine, Surgery, Pediatrics, Obstetrics & gynecology, Psychiatry, ENT, and Opthalmology) provide both inpatient and ambulatory teaching. The student questionnaire revealed that students were satisfied with the ambulatory teaching.

Inpatient and ambulatory teaching and training for the 4th, 5th, and 6th year medical studnets is mainly done at the following teaching sites: King Abdul Aziz University Hospital (704 inpatient beds expandable to 847 inpatient beds + 136 ambulatory beds), King Fahad General Hospital (802 beds), King Abdul Aziz Hospital & Oncology Center (600 beds), Maternity & Children Hospital (400 beds), Mental Health Hospital (250 beds). In addition to the aforementioned hospitals, interns are also trained in King Khalid National Guard Hospital (500 beds), King Fahad Armed Forces Hospital (500 beds), and King Faisal Specialist Hospital and Research Center (300 beds). All of these sites are well established tertiary care centers that provide faciltities and varieties of patients appropriate for teaching. These faciltities are also accredited by the Saudi Commission for Health Specialties for training of graduate students.

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C. Teaching and Evaluation:

1. **Comment on the adequacy of the supervision of medical students during required clinical experiences. Discuss the effectiveness of efforts to ensure that all individuals who participate in teaching, including resident physicians, graduate students, and volunteer faculty members, are prepared for their teaching responsibilities.**

Students Supervision

Each student in the 6th year keeps a log book for participation in the required activities and procedures during the clerkships. This includes attending outpatient clinics, tutorials, clinical teaching sessions, and observing or performing procedures. Instructors or tutors should sign corresponding entries and this gets verified at the end of the clerkship and marks are assigned. . Students keep log books in the ECECS module (3rd year), Clinical Skills Module (4th year), and Paediatrics and Family Medicine (5th year). The Phase-II Curriculum Committee demanded that all clinical departments define a list of core clinical cases/conditions the students are expected to encounter during their clerkship. Such a list is based on predefined criteria sent to the departments [See Appendices File – Section II, Appendix 2.3 (SII-A2.3): "Prioritization check list for selection of clinical cases"]. Departments should also define the number of exposures required for each case and number of presentations expected from each student with the date and signature of the instructor documenting compliance. The list is currently being prepared by each clinical department and is going to be approved in departmental meetings.

Faculty preparation for teaching responsibilities

The course specification template of the National Commission of Academic Accreditation and Assessment (NCAAA) was made available to all teaching staff either through hard copies in the departments or soft copies on the E-Learning Management Electronic System (EMES Med). This specifications template is a comprehensive overview of the course requesting information related to the principle department, participating departments, duration and weight of the course, its placement in the curriculum map, relation to other courses, general aim, ILOs of the course in the five learning domains, alignment with instruction and assessment strategies followed in the course, and educational resources available for adequate delivery of the course.

Data related to courses, study guide, CV of the teaching staff, courses' specifications, courses' reports, results of evaluation of courses by students and staffs, students' scores, samples of students' activities, samples of formative and summative exams, and the improvement action plans of the courses are compiled in the so called "Course Portfolio" for each course in the respective department. The study guide directed to students serves also as a contract between the students and faculty members to ensure that faculty members are teaching the same material in both campuses. In spite of availability of the aforementioned material (course specifications, study guide, and course portfolio) for each course in EMES MED or as hard copies in the respective departments' archives, awareness of such guiding material is not satisfactory among junior teaching staff and residents involved in teaching. To resolve this deficiency, an annual orientation day was organized by the VDBS and the VDCA for students, senior and junior faculty members, as well as non-faculty members participating in instruction.

Faculty development programs are available through many opportunities [See Appendices File – Section IV, Appendix 5 (SIV-A5): "Calendar of Educational Activities for Faculty Members"]**:** (A) locally through an annual calendar issued by both the Medical Education Department at the FOM, and the CTLD at the university. A series of training courses and workshops are offered throughout the academic year. These courses cover almost all skills required by the staff for effective teaching and assessment in either basic or clinical sciences. These workshops, include, tutor preparation for Problem Based Learning, effective student assessment and writing test items, giving feedback, and communication skills. An assessment to identify the most required training courses was done by the Medical Education Department. The departments were requested, through a questionnaire, to identify the required training courses and accordingly the Medical Education department formulated its plan and time table for the training courses. Feedback from staff who attended these workshops was analyzed and interpreted and accordingly a plan for improvement was designed.; (B) nationally through many events addressing development of teaching and assessment skills in medical education; (C) internationally through invitation of many international figures in medical education from all over the world to conduct workshops to improve medical education skills among faculty members in general and residents and clinical staff involved in instruction, in particular. Examples of such workshops conducted at the FOM include "Teaching on the Run" delivered by, University of Sydney, Australia, "Assessment Strategies" delivered by the University of Illinois at Chicago, "Research Ethics" by Harvard School of Medicine, and "Standardized/Simulated Patients in Medical Education" by both University of Illinois at Chicago and Maastricht University; (D) Many opportunities are available for teaching staff to receive training, either locally or internationally, on specific required fields driven by the strategic objectives of the Teaching/Learning Process in the Faculty. Partnership with the University of Illinois at Chicago gave the FOM an opportunity to train some of the faculty members on standardized patients and simulation which conform to one of the operational projects in the Faculty Strategic Plan. Trained faculty members act as a nucleus for initiating a specialized program in the CSC in an attempt to accomplish teaching in a safe environment aiming at one of the attributes of the educational program "Patient-Doctor Safety". Junior teaching staffs are allowed to have a scholarship to Dundee College to receive the "Essential Skills in Medical Education" course. All of these opportunities and workshops helped fine-tune the teaching skills of the faculty.

Course evaluation questionnaires by students and course reports that contain student results are two important tools used to evaluate the effectiveness of education and ensure that all individuals who participate in teaching are prepared for their teaching responsibilities. Data of course evaluation by students and faculty members are included in the annual course report for all courses and clerkships. The Medical Education Department reviews these annual reports and a comprehensive feedback report is submitted to the VDBS for courses in year 2 and 3, and VDCA for year 4, 5, and 6. The Vice Dean then forwards the feedback report to the respective departments to resolve any deficiencies in the teaching cycle if any.

As per request of faculty members in the curriculum committees and in workshops evaluation forms, targeted focused training packages are needed. Consequently, a survey is performed by the Medical Education Department using a list of topics which cover all attributes and competencies that should be possessed by medical staff members [See Appendices File – Section IV, Appendix 6 (SIV-A6): "Final Annual Report of the Department of Medical Education 2009/2010, Survey for assessment of educational needs of faculty members"]. Results revealed that staff members need more training in assessment particularly formative assessment, communication skills and feedback, and management and leadership skills. This is also supported by the results of the evaluation of courses and instruction team by students where 80% of students do not receive structured periodic feedback. Staff members in their evaluation of courses agreed that feedback is present but in an unstructured manner and is spontaneous during clinical cases presentations (inherent to the

nature of clinical settings). It just needs to be structured and periodical. In addition, the QAAU conducted a survey to evaluate the quality of assessment practice in the Faculty. The study spotted areas which need more focused training in the assessment aspect. These included: formative assessment with feedback, constructing case-based and integrated items, conducting OSCE, and using student portfolio in assessment. These opportunities for improvement were rectified by the Main Curriculum Committee Meeting on 1/1/2011, and support has been given to the Medical Education Department to organize focused training packages for both junior and senior staff as well as for residents.

2. **Evaluate the adequacy of methods used to evaluate student attainment of the objectives of the educational program. How appropriate is the mix of testing and evaluation methods? Describe the frequency with which students receive formative assessment in addition to summative evaluations? Discuss the timeliness of performance feedback to students in the preclinical and clinical years.**

A survey was conducted in 2009/2010, by the QAAU for the evaluation of the assessment practice in the Faculty. The tool used was a list of good practice items for assessment process derived from national & international standards, and the response rate was 100% from all preclinical and clinical departments . Results revealed that 87% of the departments have assessment policies which conform to those set by the university and FOM bylaws, 92% uses both continuous and final assessment and 74%uses both formative and summative assessment. Sixty seven percent of the faculty members agreed that they provide feedback to students after any form of assessment. In Phase-II, due to the inherent nature of the clinical teaching, oral feedback is spontaneously given to students during clinical presentations. The Department of Pediatrics utilizes the student portfolio and log book for providing a written feedback to students. Interns also receive documented evaluation with narrative comments at the end of each rotation. Most (88%) faculty members agreed that MCQs dominated in all written exams. Many departments, such as Histology, Embryology, Anatomy, Clinical Biochemistry, Pharmacology, Medical Microbiology, and most clerkshipsalso use short essay questions; 81% use case-based items, and 63% use integrated items. Most (85%) clinical exams are structured, e.g.: OSCE, however, 58% of faculty members agreed that the faculty conducting OSCE need more training. There is great consensus (87%) that the assessment tools used are feasible and that faculty need more training in writing case-based and integrated items. Defining the validity and reliability of the exams is encouraged. To facilitate this, faculty members received intensive training on blueprinting through a number of courses on assessment over the last two years. Currently, 67% of staff agree that departments plot exam blueprints and 78% agreed that items in all exams cover all the domains (knowledge, skills, and attitudes). Exams are evaluated for item design, difficulty and discrimination indices, as well as their reliability via item analysis by the departments/modules' committees (80%). About 61% of the departments/module committees utilize the results of the item analysis for improving exams.

In Phase-I, a uniform system of assessment is applied for core courses; it compromises a quiz (10%), mid- term (30%), final written exam (40%), and OSPE (20%). Organ-System modules assessment includes: mid-module exam (25%), final written exam (40%), OSPE (20%), and PBL (15%). In clerkships, both written (MCQ and Essay) and clinical (OSCE and Long cases) are the main methods for student assessment; the weight of each component of the written and clinical exam varies according to the department. The purpose of the exams is summative and there is informal verbal feedback after long case exam. Fifty nine percent of faculty members agree that remedial actions are taken before the final summative exams.

The FOM supported two faculty members to have an International Fellowship in Medical Education from "The Foundation for Advancement of International Medical Education and Research (FAIMER)" institute to improve the system of assessment in the FOM. The fellowship project of the first faculty member is a Six-Steps Approach for Developing Standardized Student Assessment System in the FOM which is currently

implemented in the Clinical Biochemistry course and the Musculoskeletal and Cardiovascular System modules. The fellowship project of the second faculty member on Formative Assessment as a component of student assessment in the Pathology Department.

3. Describe the system for ensuring that students have acquired the core clinical skills specified in the school's educational program objectives. Evaluate the frequency with which students are observed and receive feedback on their clinical skills. Are there any limitations in the school's ability to ensure that the clinical skills of all students are appropriately assessed?

Core clinical skills are taught and assessed through an innovative spiral curriculum which starts early in second year by the Basic Emergency Care module [See Appendices File – Section II, Appendix 1.5 (SII-A1.5): "Curriculum Relations Map"]. By the end of this module, students will be able to apply BLS skills, describe injury prevention, apply triage and identify toxidromes. They will also be able to take focused history, and perform primary and secondary survey followed by focused physical examination for minor wounds, burn victims, common fractures, common household injuries, dyspnea, chest pain, syncope, fever, sore-throat, cyanosis and hemoptysis.

The ECECS module in the third year helps the students to acquire an early clinical experience related to common clinical situations, and acquire knowledge, attitude & skills in doctor-patient communications, teamwork, and the human, ethical, psychological, and legal aspects of healthcare. In the fourth year, in the Clinical Skills Module, students will be able to learn in depth and practice different clinical skills in the proper way and sequence. Finally in the 5th, and 6th years and the internship year, the students are heavily involved in different clerkships covering all required core clinical skills for general practitioners.

Assessing core clinical skills also differ all over the 2 phases and the internship year of the new curriculum, starting from the exam of BLS certificate in second year; continuous assessment and logbook in ECECS module in the third year; case presentation and OSCE in Clinical Skills module in the fourth year; and OSCE and long cases in clerkships in the 5th and 6th year. All assessment is summative in the form of End of Posting exam. Formative assessment, in the form of verbal feedback is provided to students during each clinical presentation encounter,. At the end of each rotation in the internship year, the clinical rotation supervisor fills up a standard evaluation form and assigns a score out of 100 marks for each intern. A minimum of 60% should be achieved for a pass grade, and if the intern fails to meet that standard, a fail grade is given, and the intern has to redo the clinical rotation at a later time.

D. Curriculum Management:

1. **Assess the adequacy of the system for managing the curriculum and ensuring that it is coherent and coordinated. Do the curriculum as a whole and its component parts undergo regular, systematic review? Describe the procedures in place to identify and rectify any problems in the curriculum as a whole and in individual courses and clerkships? Evaluate the effectiveness of the procedures, and provide specific illustrative examples. Provide evidence that the school monitors the content covered in the curriculum to ensure that all desired content is covered and gaps or unwanted redundancies do not occur.**

The curriculum is managed by an adequate system that ensures its coherence and coordination. The management system is composed of a MCC, chaired by the Dean, and managed by a Curriculum Coordinator, the VDBS. Members of the MCC represent different departments and include senior faculty members who witnessed the changes that occurred in the curriculum. The MCC meets 6 times per year. The MCC oversees the curriculum in all its stages, whereby it leads, directs, coordinates and controls the curriculum. Decisions are taken by the MCC after discussing curriculum issues raised by different committees and units that participate in the management of the curriculum. The takes decisions only when they are based on certainty of adequacy of human and physical resources required for proper implementation of any curricular change. The minutes documenting decisions of the MCC are submitted to the Faculty Board and subsequently the university board for approval.

There are supporting curriculum committees which explore and discuss curriculum issues at a more detailed level. They are concerned with planning and proposing solutions to the MCC. These include two committees: Phase-I Curriculum Committee chaired by the VDBS, and Phase-II Curriculum Committee chaired by the VDCA. Members of these two committees represent the chairmen of the departments and coordinators of the modules, as well as medical educationalists and quality experts selected by the chairman of the committee. Issues discussed in these committees are defined after scanning all departmental and module committees' meetings minutes which occur at least once monthly. Meeting minutes are submitted to the coordinator of the MCC.

A Curriculum Monitoring Committee (CMC) is charged with the responsibility of monitoring issues concerning the content and implementation strategies of the curriculum and checking their congruence with the intended program objectives. The CMC reports directly to the dean.

In April 2010 the QAAU was established [See Appendices File – Section I, Appendix 9 (SI-A9): "Dean's Memo for Establishing QAAU"] with job description well defined by the Vice Deans Consultancy Committee chaired by the dean. One of the principal tasks assigned to the unit is the evaluation of the whole educational process including the curriculum, faculty, students, educational resources and the academic environment. The unit is committed to conduct a comprehensive evaluation of the program to help shaping the program. The evaluation consists of a program evaluation aggregate composed of: (i) routine systematic evaluation conducted during the academic year relying on both the faculty and students as data sources; (ii) etrospective evaluation of the program by the graduates of each graduation year; (iii) longitudinal evaluation which includes long-term retrospective evaluations and ad hoc evaluations. The long-term retrospective evaluations go beyond evaluations conducted by staff internally. It involves internal self study combined with site visits by outside experts, i.e. accreditation visits. The ad hoc evaluation represents evaluation activity done for a special occasion to address unusual or problematic situations which need particular focus at a particular time. The tools vary according to the purpose of evaluation. Tools include evaluation questionnaires distributed at the end of the course to both students and staff. The students fill out two questionnaires: one to evaluate the

course, instruction team, continuous assessment, and educational resources; the other evaluates the student's perception of his/her ability to do the ILOs of the course. The staff fills out only one questionnaire evaluating the course. The unit also uses survey lists in addition to structured interviews with stakeholders to collect data for the annual educational program evaluation report [See Appendices File – Section II, Appendix 1.4 (SII-A1.4): "Annual Educational Program Evaluation Report 2009/2010"]. The report evaluates the program with regards to the following aspects: (i) design regarding the sequencing of courses and how they relate to each other, spotting redundancies and or deficiencies, ensuring coverage of the program objectives by the courses, checking for alignment between the learning objectives of the courses and the instruction and assessment strategies. This is achieved by various tools including plotting a program matrix, a curriculum relation map, and program spreadsheet. In addition, any course specifications document uploaded on the unit's website is revised using a checklist and feed back report is issued to the course coordinator to address any deficiencies or comments; (ii) Evaluation of the teaching/learning (T/L) strategies and assessment. T/L is evaluated to ensure that the strategies adopted accomplish their expected goals; among these are self-directed learning, problem-based learning, integration, electives, and research. The tools used include the program spreadsheet, students' evaluation questionnaires, and staff evaluation questionnaires. Assessment process is evaluated through a survey that contains items of good practice of assessment process distributed to all departments and the results analyzed to make a comprehensive evaluation of assessment process based on national and international standards; (iii) Post implementation evaluation of courses is done through students' and staff evaluation questionnaires. Feedback reports are sent to the departments and course coordinators who discuss the results with the course committee or department members, then take corrective actions, if necessary, with documentation of such corrective actions in an annual improvement action plan in the course report. The unit follows a "Report Cycle" set by the NCAAA, whereby the scores and results of evaluation are used by course coordinators to issue an annual course report which addresses challenges and limitations that hindered the proper delivery of the course and the explanation of any criticisms noted in the evaluation reports. The course report concludes with an improvement action plan to be used by the QAAU to monitor the modifications and developments intended in the following year. With graduation of a batch, a program report is also issued using the course reports and the graduates' evaluation questionnaires. All aforementioned data are analyzed to triangulate the evidence and produce an annual educational program evaluation report which is then submitted to the VDQD and subsequently to the MCC for revision and corrective actions, if necessary.

All recommendations which require educational consultation, technical support and training are taken care of by the Medical Education Department, which mainly acts as consultancy site for educational issues related to the curriculum design, assessment, and teaching/learning skills. The department delivers a variety of training courses and workshops for staff development, and technically supports the curriculum committees. Two ad hoc committees were formed in the Department of Medical Education: one for training staff in all departments on formulating SMART learning objectives and compiling the course specifications; the other for compiling the program specifications.

The curriculum has been comprehensively reviewed three times: first in 1988, second in 2003, and the third in 2009. Changes, when appropriate, were made in the curriculum to fulfill the required outcomes and attributes. Planning for review and implementing changes is achieved based on information collected from literature, evaluation reports, teaching staff, medical students, visits to other medical schools and as part of preparation for national accreditation by the NCAAA and international recognition by the LCME. Additionally, there is a systematic routine review of courses and the program through a report cycle starting with annual course reports based on students' performance scores and evaluation questionnaires and an annual program report based on the course reports and the graduates' questionnaire and finally a comprehensive

annual educational program evaluation report [See Appendices File – Section II, Appendix 1.4 (SII-A1.4): "Annual Educational Program Evaluation Report 2009/2010"]. As a result of the second review, the hybrid system-based curriculum has been implemented since 2006. Regular review of the hybrid curriculum is performed to shape the curriculum and ensure logical sequencing of its various components, coordination, horizontal and vertical integration, and appropriate instruction and assessment methods aligning to the objectives. The organ-system modules demonstrate a satisfactory degree of horizontal and vertical integration which allows the students to have a sense of the clinical environment through PBL sessions.

As a result of the regular systematic review of the curriculum, some changes have been made. Two topics namely: "Patient Safety" and "Research Methodology" have been added to the ECECS module in the 3rd year in 2010/2011. Additionally, a complete course on "Patient Safety" (2 credit hours) has been added to the Internal Medicine Clerkship in the 6th year. Electives and special study modules have also been added to the 4th and 5th year (2 credit hours over 2 weeks each ie 4 credit hours total) commencing 2009/2010. Medical Ethics course has also been introduced in the 4th year (2 credit hours) to improve the representation of the attitudes domain in the curriculum. One of the major changes recently undertaken in the curriculum was the merging of clerkships in the 4th year (Internal Medicine, Surgery, Obstetrics & Gynecology, and Pediatrics) into one full term module referred to as Clinical Skills Module (20 credit hours) commencing 2009. This change was in response to feedback from faculty and graduates in the previous years who raised concerns about inconsistency in teaching clinical skills in different departments.

In response to the need assessment report for 2009/2010 conducted by the Department of Medical Education, the MCC decided to start focused training packages in assessment regarding: formative assessment with feedback, writing case-based integrated items, and conducting an OSCE.

The FOM monitors the content covered in the curriculum and ensures that redundancies and/ or deficiencies do not occur. In 2008, an ad hoc committee was formed to review the curriculum for any redundancies within and/or between courses. In 2010, the QAAU plotted a program matrix to ensure a balanced coverage of program objectives and exclude redundancies. Some redundancies were identified within the Anatomy course, and within the Reproductive/Endocrine module. Some redundancies have also been identified between the Obstetrics & Gynecology clerkship and some core courses, and between Surgery clerkship and some basic core courses and modules. The MCC gave instructions to the corresponding vice deans to deal with these redundancies with the corresponding course coordinators.

2. Assess the effectiveness of curriculum planning in the medical education program. Describe efforts to ensure that there is appropriate participation in planning and that resources needed to implement the plans will be available.

Effectiveness of curriculum planning is secured by many factors which include: (i) A strong curriculum management structure which comprises qualified expertise and senior staff members and is embodied in: the MCC, Phase-I Curriculum Committee, Phase-II Curriculum Committee, Vice Deans Consultancy Committee, and the Educational Affairs office. It sets strategies for curriculum implementation and development; (ii) A second line curriculum management structure embodied in QAAU and the CMC. They evaluate and monitor the curriculum and the program; (iii) A dedicated Medical Education Department that provides technical support to curriculum committees and academic departments; (iv) Academic Departments that implement the policies and decisions taken by the curriculum management committees; (v) Available human and physical resources that ensure implementation of the strategies adopted.

The steps taken to reach decisions concerning curriculum planning are either directed in the "bottom-up" approach or the "top-down" direction. Evaluation of the courses by students and staff is analyzed in the QAAU and reports issued to the VDQD. The later communicates the results to the chairmen of departments and module coordinators, who discuss the report in the departmental or module meetings and sugget recommendations which are raised to the Phase-I or Phase-II curriculum committees, as appropriate. In the phase curriculum committees decisions are taken for any suggested minor changes; however, major changes in the curriculum are only discussed and then proposed to the the MCC for approval. The MCC can form ad hoc committees for executing urgent issues based on matters discussed weekly in the Vice Deans Consultancy Committee. Memos are distributed to all departments to communicate decisions taken in response to their recommendations and to students' evaluation.

Curriculum planning was based on the first strategic plan of the Faculty developed for the period 2007-2012. The strategic plan focused mainly on curriculum development. The strategic planning process was based on a SWOT analysis which led to formulation of goals and strategic objectives which were then translated into an operational plan. Out of 50 operational projects, 20 were directed to the curriculum, 95% of which were completely accomplished. Indicators of accomplishment include: 100% of the course specifications for Phase-I and II have been compiled; implementation of 90% of the courses of the modified curriculum and the remaining 10% are still due to be implemented in 2011/2012; establishment of a structured system for assessing students and staff satisfaction; annual staff development programs to enhance teaching/assessment skills for the new curriculum; establishment of a student support unit (SSU). Addition of topics to certain courses; innovating new courses; re-sequencing of courses, were based on monitoring, evaluating and reviewing the courses enlightened by the graduates' attributes approved by the MCC. Students and staff evaluation results show progressive improvement from one year to another; and this was evident from the increasing 6th year matriculation rate over the past five years being 87% in 2006, 81% in 2007, 91% in 2008, 90% in 2009, and 97% in 2010 as compared to the previous four years which were 87% in 2002, 81% in 2003, 82% in 2004, and 83% in 2005. Changes in the curriculum occur to meet the strategic objectives set by the FOM which is supported by a budget allocated to implement the operational plan.

3. How does the curriculum committee assure that students have sufficient time for learning? Evaluate the educational workload and the balance between education and service in the clinical years. Assess the effectiveness of the mechanisms used to monitor student duty hours. Do students receive sufficient formal teaching during their clinical clerkships?

The FOM program is a six years program plus an internship year. The medical curriculum starts after a university foundation year and is composed of two phases: Phase-I, composed of two years, during which scheduled core courses and organ-system modules are delivered, and Phase-II, composed of three years, during which scheduled core clerkships and a variety of clinical courses and electives are delivered. Evaluation of workload by students during the curriculum is carried out at the end of each course or clerkship through interviews with students' leaders. Students indicated that the schedule in Phase-I is somewhat loaded with lectures, whereas in Phase-II it is acceptable. Students' requests regarding rescheduling of sessions to spare time to prepare for exams is entertained.

Clerkship refers to the scheduled clinical courses delivered in Phase-II of the curriculum in the 4th, 5th, and 6th years. The internship year that follows is the 7th year during which interns are assigned clinical service and on call responsibilities according to the regulations set by the Internship Office under the VDCA [See Appendices File – Section II, Appendix 19 (SII-A19): "Rules and regulations for clinical rotations of the house officers "]. Mechanisms for assessing the effectiveness of duty hours of interns are available in some departments such as Medicine, Pediatrics & Surgery. Students in Phase-II has scheduled sessions for bedside

teaching and for preparing cases (clerking) for presentation to the teacher in these sessions. They also have lectures and tutorials for common diseases. Sixth year medical students (externs) are assigned clinical duties including patients to look after during their rotation, attendance of daily morning meeting from 8 am to 9 am to discuss admissions, and attendance of clinical rounds with the housestaff. In the Medical clerkship, the 6th year medical students are also required to do at least one "on call" every 1-2 weeks from 8:00 am to 10 pm.

4. **For schools that operate geographically separate campuses, evaluate the effectiveness of mechanisms to assure that educational quality and student services are consistent across sites. In order to assess the comparability of the evaluation system, review the patterns of grades given at the geographically separated campuses.**

   The FOM does not operate geographically separate campuses.

E. Evaluation of Program Effectiveness:

1. Describe the evidence indicating that institutional objectives are being achieved by enrolled students.

There are several internal and external indicators used to ensure that institutional objectives are achieved:

1. Internal indicators include
   A. Scores of students in summative exams which measure the ILOs of the program in the domains of knowledge, skills, and attitudes. This is secured by plotting exam blueprints, a practice adopted by 75% of courses. Assessment tools are also of multiple types to ensure measurement of all levels of the cognitive, psychomotor and behavioral taxonomies. These include written exams in the form of MCQs, short essay questions, structured objective practical (OSPE) and clinical (OSCE) exams, and clinical exams in the form of long clinical cases. Students' attitude is supervised and addressed in log books in some departments such as pediatrics. Scores of students showed a steady rise over the past five years in each academic level in all types of exams. For example, the average scores of students in the OSCE exam for the Clinical Skills Module's were 71% in 2009/2010 and 75% in 2010/2011.
   B. 6th year matriculation rate has been as follows: 87% in 2002; 81% in 2003; 82% in 2004; 83% in 2005; 87% in 2006; 81% in 2007; 91% in 2008; 90% in 2009; and 97% in 2010).
   C. The courses/clerkships evaluation questionnaire and the graduates' questionnaire. In the academic year (2008/2009), about 62% of the graduates reported that they were confident that they had acquired the clinical skills required to begin a residency program. Graduates' evaluation questionnaire revealed that 83% of the students rated their educational experience as at least good in the Internal Medicine clerkship, and 81% of the students rated their educational experience as at least good in the Surgery clerkship.
   D. The QAAU started a pilot evaluation of the students' perception of achieving the learning objectives by distributing a list of the course objectives at the end of the course; objectives which are perceived as not achieved by students are communicated to the course coordinator to take remedial action.
   E. Most of our graduates who did their postgraduate board training in general specialties or subspecialties in Saudi Arabia or abroad (mainly Canada and USA) received good evaluations and successfully completed their training and obtained the desired certificates.

2. External indicators include:
   A. Our graduates' **pass rate** in the licensing examination of the Saudi Commission for Health Specialties compared to other Faculties of Medicine in Saudi Arabia (the pass rate for each faculty can be calculated as follows: Number of FOM graduates who passed the licensing exam / total number of FOM graduates who sat for the examination X 100).
   B. Our graduates' **average, range, and highest score** in the licensing examination of the Saudi Commission for Health Specialties compared to other Faculties of Medicine in Saudi Arabia.
   C. Our graduates' **acceptance rate** in training program: percent of our FOM graduates accepted for training (Number of our FOM graduates who were accepted for training / total number of our graduates who applied for training X 100).
   D. Proportion of our FOM graduates enrolled in all training programs compared to other faculties (Number of our FOM graduates accepted for enrollment as first year resident (R1) in any training program / total number of applicants accepted as R1 X 100)

   Results of the Licensing Examination conducted by the Saudi Commission for Health Specialties for medical graduates of the largest three Faculties of Medicine in Saudi Arabia for year 2008-2010

Indicator	King Abdulaziz University, Jeddah			King Saud University, Riyadh			King Faisal University, Dammam		
	2008	**2009**	**2010**	**2008**	**2009**	**2010**	**2008**	**2009**	**2010**
Number of candidates who wrote the exam	365	184	409	340	261	498	217	117	244
Number (%) of candidates who passed the exam	320 (88)	141 (76.6)	370 (90.5)	298 (88)	195 (74.7)	448 (90)	180 (83)	72 (61.5)	206 (84.4)
Average score (mark)	58	55	61.4	59	62	62	58	51	63
Range of scores (mark)	37-80	31-79	31-89	29-78	22-78	32-87	35-78	30-74	34-81
Highest score (mark)	80	79	89	78	78	87	78	74	81

2. Discuss how information about enrolled students and graduates is used to evaluate and improve the medical education program.

One of the principal tasks assigned to the QAAU is the evaluation of the whole educational process including the curriculum, faculty, students, educational resources, and the academic environment. The unit is committed to conduct a comprehensive evaluation of the program to help shape the program, both while in operation and for a next cycle. The program evaluation is composed of (i) routine systematic evaluation conducted during the academic year relying on both the faculty members and students as data sources; (ii) annual retrospective evaluation to evaluate the program for each graduation year which includes data collected the preceding year; (iii) longitudinal evaluation which includes long-term retrospective evaluations and ad hoc evaluations. The long-term retrospective evaluations go beyond evaluations conducted by staff internally. It involves internal self study combined with site visits by outside experts, i.e. accreditation visits. The ad hoc evaluation is an evaluation activity carried out for a special occasion to address unusual or problematic situations which need particular focus at a particular time. All evaluation activities are driven by the information related to students and graduates.

In the last week of any course and before the final summative examination, the students are requested fill out two questionnaires. The first one is intended to evaluate the course, instruction team, continuous assessment, and educational resources. The second one evaluates the student's perception of his/her ability to do the ILOs of the course. The unit also uses survey lists in addition to structured interviews with students to collect data for the annual educational program evaluation report [See Appendices File – Section II, Appendix 1.4 (SII-A1.4): "Annual Educational Program Evaluation Report 2009/2010"]. The report evaluates the program based on the results of the students' questionnaires and interviews in the following aspects: (i) Design regarding the sequencing of courses and how they relate to each other, spotting redundancies and or deficiencies, ensuring coverage of the program objectives by the courses, checking for alignment between the learning objectives of the courses and the instruction and assessment strategies. This is achieved by various tools including plotting a program matrix, a curriculum relation map, and program spreadsheet. In addition, any course specifications document uploaded on the unit's website is revised using a checklist and a feedback report is issued to the course coordinator for modifications. (ii) Evaluation of both the teaching/learning (T/L) strategies and assessment. T/L is evaluated to ensure that the strategies adopted accomplish their expected

goals; among these are self-directed learning, problem-based learning, integration, electives, and research. The tools used include the program spreadsheet, students' evaluation questionnaires, and staff evaluation questionnaires. (iii) Post implementation evaluation of courses is done through students' and staff evaluation questionnaires. Feedback reports are sent to the departments and course coordinators who discuss the results with the course committee or departmental meeting, then take corrective actions, when needed, with documentation of such corrective actions in an annual improvement action plan in the course report. The unit follows a "Report Cycle" set by the NCAAA, whereby the scores and results of evaluation are used by course coordinators to issue an annual course report which addresses challenges and limitations which hindered the proper delivery of the course and the explanation of any criticisms noted in the evaluation reports .

The course report ends in an improvement action plan which is used by the unit to monitor the modifications and developments intended in the following year. With graduation of a batch, a program report is also issued using the course reports and the graduates' evaluation questionnaires. All aforementioned data are analyzed to triangulate the evidence and produce an annual educational program evaluation report which is then submitted to the VDQD and subsequently to the MCC for revision and corrective actions, if necessary.

III. MEDICAL STUDENTS

A. Admissions:

1. Critically review the process of recruitment and selection of medical students, and evaluate the results of that process. Is the size of the applicant pool appropriate for the established class size, both in terms of number and quality? How are the medical education program's selection criteria validated in the context of its mission and other mandates?

Admission procedure and the selection criteria for enrollment of students into the FOM are clearly described on the university website (under the Deanship of Admissions and Registrations) as well as in a hard copy prospectus [See Appendices File – Section III, Appendix 1 (SIII-A1): "Admission Guide, in Arabic Daleel Alqubool"]. The applicants to the first year of the university, "Foundation Year", fill out electronically application forms which are then reviewed to confirm the information that has been entered by the students. All applicants take an entrance examination called Standard Achievement Admission Test (referred to in Arabic as Tahsili) & General Aptitude Test (referred to in Arabic as Qudrat) during the final year of their high school. The examination is in multiple choice format assessing the basic knowledge in biological and physical sciences, English language, and cognitive skills. Depending on the percentage of marks obtained in the high school final examination (50% of the weight) and the performance in the entrance examinations (30% Qudrat and 20% Tahsili), a rank list in order of merit is determined for males and females separately. About 2000 students each on the male and female side are admitted into the Foundation year strictly according to the order of merit.

The second stage for assigning students to their Faculty of choice takes place by filling online applications for admission to the Faculty of Medicineat the end of the Foundation Year. Selection of students who wish to be enrolled into the FOM is based on their performance in the Foundation year whereby students are listed according to the rank of merit. About 175-200 students each in the male and the female section are admitted to the FOM. As mandated by the FOM, students admitted to the FOM are required to obtain at least an (A) grade in the following subjects: General Biology; General Chemistry; General Physics and English language. The list of students selected to be enrolled into the Faculty of Medicine is displayed electronically via the On Demand University Services (ODUS) computer system (http://admission.kau.edu.sa/).

Enrolled Saudi students surpass non-Saudi ones, whereby the approximate ratio of Saudi to non-Saudi students is 25: 1. Because of marked shortage of national doctors who currently account for only 19% of doctors working in Saudi Arabia, generally only Saudi nationals are admitted to the faculties of medicine in Saudi Arabia. However, a small percentage (usually <5%) of non-Saudi nationals are accepted including students of Saudi mothers/non-Saudi fathers, students on scholarships sponsored by Gulf Council Countries (GCC), and non-Saudi students admitted by Royal Command. Non-Saudi students receive the same financial incentive during study years; follow the same admission rules as their peer Saudis. There is no tracking in the curriculum between both categories of students. As regards gender, equal number of male and female students is enrolled every year to the FOM.

Selection of students to be enrolled to the FOM after successful completion of the Foundation Year has been done automatically by the University's Deanship of Admission since 2004 based on predefined selection criteria mandated by the FOM. No interviews have been done for students since this automatic selection system has been in effect since 2004. Prior to that, interviews were routinely done for students to be enrolled into the FOM. The lack of interviews to assess non-cognitive and non-academic skills of students enrolled into the FOM since 2004 has been identified by the self study as an area for improvement. Consequently, the FOM

has requested from the President of the University approval for reinstating a structured interview (in the form of mini multiple interviews) of the students who have been automatically selected by the computer system to further test the non-cognitive skills. A psychometric analysis suggested by experts in this field is likely to be used in the next academic year. This request was approved by the president to start the next academic year.

Evaluation of the effectiveness of the current reveals many positive indicators. For the academic year 2008-2009, 2232 male and 2228 female students were admitted to the foundation year after which 329 students (164 male and 165 female) were enrolled into the FOM. The average score of the students matriculating from the foundation year for admission into the FOM has been 92% for 2008-2009, and 91% for 2009-2010. Data obtained from the Academic Affairs Administration showed that 78% of the students graduated in the minimum stipulated time which supports an effective admission policy. Other indicators of an effective admission policy is the decreased percentage of second year medical students withdrawing from the FOM over the last five years (1% in 2005/2006; 0.6% in 2006/2007; 0.5% in 2007/2008; 0.4% in 2008/2009; 0.3% in 2009/2010), the decreased overall percentage of students withdrawing from the FOM at any level (1% in 2005/2006; 0.87% in 2006/2007; 0.93% in 2007/2008; 0.66% in 2008/2009; 0.3% in 2009/2010), and the progressive increase in the percentage of students matriculating from the 6th year over the last five years (87% in 2006; 81% in 2007; 91% in 2008; 90% in 2009; and 97% in 2010) as compared to the previous four years (87% in 2002; 81% in 2003; 82% in 2004; and 83% in 2005).

2. Evaluate the number of students of all types (medical students, residents, visiting medical students, graduate students in basic sciences, etc.) in relation to the constellation of resources available for teaching (number of faculty members, space, clinical facilities, patients, educational resources, student services, etc.).

The infrastructure designed at the time of inception of the medical faculty was for student strength of 250 students each on the male and female side. Adequate building space, open space and lecture halls are available for 250 students each on the male and female side. There are 9 lecture halls of different capacities available exclusively for the FOM. The maximum capacity of two of these lecture halls is 250 each. The seating capacity in the male and female sections is 4 and 3 times the required capacity, respectively. All the 9 lecture halls are well equipped with LCD projectors, microphones, and electronic smart boards, with two or more entrances. Twenty five rooms each on the male and female side serve the smooth conduction of PBL sessions.

At present, 350-400 students are enrolled into the FOM each year. Ninety three to ninety six percent of the students agreed that the CSC is very well equipped and helps them to learn skills that they miss on the clinical service. The CSC is also used by studnets for further peer to peer and self directed training. The CSC provides a safe environment for students, graduates and staff members. The center adopts a booking service system for 3 categories of sessions: (a) Regular sessions scheduled in the curriculum for the 4th year students in the Clinical Skills Module whereby 14 groups use the CSC in two shifts for five days a week for 20 weeks which is the whole duration of the module, the 5th year students use it in the Obstetrics/Gynecology and Pediatrics clerkships; thus four groups use the center twice weekly for 12 weeks, and finally the 6th year students book the center for their Internal Medicine and Surgery clerkships according to the skills required. (b) Walk-ins for self directed learning which usually occur during the break time from 12:00 to 01:00 o'clock and mounts to approximately 30 times per month; (c) Graduates' exams conducted by the Saudi and Arab Boards.

The FOM has the privilege of having a dedicated teaching hospital (KAUH) that is internationally accredited by Accreditation Canada and under the sole control of the FOM. KAUH has a bed capacity of 704 expandable to 847 beds. It has a wide variety and number of patients on the wards, outpatient department, or

emergency room which ensures adequate exposure of students to required clinical cases. This is confirmed by the results from the students' clerkship evaluation questionnaires, where 91% of the students agreed that the assigned types of clinical cases are adequately available, and 87% of them agreed that their number is adequate at KAUH. The ratio of exposure of students to teaching beds in different teaching sites ranges from 2-3 beds per student per day in any clinical rotation. The total seating capacity of all teaching classes in the hospital in relation to the number of male and female students in the three clinical years was around 1.8 times the required. As a result of the steady expansion of KAUH reaching in year 2010 up to 704 inpatient beds (expandable to 847 beds) and 136 ambulatory beds and the presence of fully equipped CSC, the departments of Internal Medicine, Surgery, and Obstetrics & Gynecology, have been teaching 4th, 5th, and 6th year students only at KAUH commencing 2010. However, the Department of Pediatrics still utilizes also the Maternity & Children Hospital (Ministry of Health) to teach clerkship students for more exposure to clinical cases.

The space and seating capacity of the main library in the male and female side are adequate. Learning material can also be accessed electronically through a big number of electronic databases facilitated by a wireless network in certain areas at any time.

The FOM plans in advance the adequacy of faculty members in relation to the number of students. The current faculty to student ratio is 1: 4.

3. Describe the school's successes in broadening diversity among medical school applicants. How well are the school's programs to enhance the diversity of the medical school applicant pool functioning? Describe the school's successes in broadening diversity among medical school applicants.

The society in Saudi Arabia is cosmopolitan with diverse races and ethnic origins. The ethnic origin of the Saudi citizens is also diverse and includes Arabs from the Arabian Peninsula as well as from all other Arab countries, Asians, Turkish, Indians, Africans, Persians, and others. As Muslims, Saudi Arabians participate in a community in which issues of race, ethnicity, and national origin should be of no significance and never form the basis for social action, political behaviour, economic organization, or admission to universities. Generally, the cultural and ethnic diversity at the FOM reflects the diversity of Saudi Arabia. Since higher education in Saudi Arabia, including the Medicine, is free of charge, all students, regardless of their social or financial status, have equal opportunities to enroll into the FOM. Further, the stipends (SR1000) given monthly to all university students encourage academically competent students who are underprivileged to enroll into the FOM.

There is a marked shortage of national doctors who currently account for only 19% of doctors working in Saudi Arabia. Because of this great need for Saudi doctors, by and large, only Saudi nationals are admitted to the faculties of medicine in Saudi Arabia. However, a small percentage (usually <5%) of non-Saudi nationals are accepted including students of Saudi mothers/non-Saudi fathers, students on scholarships sponsored by Gulf Council Countries (GCC), and non-Saudi students admitted by Royal Command. Non-Saudi students receive the same financial incentives during their study and they follow the same admission rules as their peer Saudis. The approximate ratio of Saudi to non-Saudi students is 25:1. As regards gender, the male to female students ratio enrolled in the program is 1:1.

4. Evaluate whether the acceptance of transfer students, or visiting students in the school's affiliated teaching hospitals, affects the educational program of regular students (i.e., in the context of competition with the school's own students for available resources, patients, educational venues, etc.).

The FOM policy regarding the transfer of students to the faculty is that no student is accepted after the third year. The small number of students accepted in transfer does not have any negative impact on the facilities and resources available to the existing enrolled students.

Category	2009-2010	2008-2009	2007-2008
Students transferring into first year	0	0	7
Students transferring into second year	13	16	15
Students transferring into third year	0	0	0
Students transferring into forth year	0	0	0
Students transferring into fifth year	0	0	0
Students transferring into sixth year	0	0	0
Visiting students taking required clerkships	42	15	20
Visiting students taking elective courses	0	0	0

The available educational resources match the number of enrolled students and the few transfer or visiting students.

The infrastructure designed at the time of inception of the FOM was for students' strength of 250 students each on the male and the female side. Adequate building space, open space, lecture halls, small group classrooms, hospital beds are available for 250 students each on the male and female side. Currently, the the male and female sections have a seating capacity that is 4 and 3 times the required capacity, respectively. New buildings exclusively allocated for the FOM are under construction to meet any increase in the number of students in the future.

The presence of the CSC serving most students in the clerkship is another advantage and a strong resource in the FOM. A special budget and space have been recently allocated to build a new CSC in a building composed of three floors for extension of its services to a wide range of users. The ratio of exposure of students to teaching beds in different teaching sites ranges from 2-3 beds per student per day in any clinical rotation. The total seating capacity of all teaching classes in the hospital in relation to the number of male and female students in the three clinical yearsis around 1.8 times the required. Fifty hospital beds have been added this year to increase the bed capacity of KAUH to 704 beds.

The current ratio of full time faculty members (professors, associate professors, assistant professors, lecturers without demonstrators) to students is 1:7. When demonstrators are included the ratio increases to 1:4. A five year plan is set in advance to increase the ratio of faculty members (without demonstrators) to students to 1: 4 by 2014.

B. Students Services:

1. Comment on the levels of student attrition and academic difficulty in relation to; The medical education program's admission requirements, Academic counseling efforts, Remediation programs. How effective is the program's system for early identification of students in academic difficulty? Describe the counselling and remediation systems that are in place, and evaluate their effectiveness.

The FOM has an approved student support system at the university level through the General Student Counseling Unit, as well as at the Faculty level via the SSU which was established in November 2010. In addition, students are also welcome to approach individual faculty members directly for support and counseling. Mentoring has also been activated in 2010, whereby students are divided into groups, 10 students each. Each group is assigned to a mentor for the whole undergraduate period of the students until they graduate from the internship year. However, mentors requested developing their mentorship skills via training courses The Faculty SSU aims at providing a wide scope of student support (financial; social; healthcare; academic; and career counseling) through a documented plan [See Appendices File – Section III, Appendix 15 (SIII-A15): "Student Support Unit plan"] based on students' needs assessment via questionnaires, complaints, and focus group interviews, conducted by the Academic Affairs Administration. Such provision is well known to students via the freshman's student guide, SSU brochures, and orientation courses. There are documented rules to define the academic difficulties and to identify students with such difficulties. Students with outstanding performance are also identified.

Annual statistics of both categories is available from the Academic Affairs Administration. Policies to support these two categories are currently under preparation. Several means are used to support and motivate high scorers and creative students such as financial and moral awards in the Graduates' Day Ceremony. Similarly, low scorers or failing students are provided with academic support programs through the SSU. The causes of academic difficulty are identified for each student individually and remedial support is proposed through various routes including communicating with departmental chairs and module coordinators, and holding interviews with those students. These activities were performed by academic counselors for each level before the SSU was established.

Academic difficulties due to psychological or social problems are also addressed by a psychiatrist and a social worker assigned to the SSU. The unit encourages those students to participate in social activities organized by the unit itself (such as student clubs, special events, and art clubs), sports, as well as informal social interactions with other students. The unit strictly observes confidentiality of those students' records. Electronic communication between the students and staff is also available (med.ssuf@kau.edu.sa).

The FOM requires that students must have studied General Biology, General Chemistry, General Physics, and English language in the secondary school and the University Foundation Year. In addition, Islamic Culture and Communication Skills are taught in th foundation year. Any academic difficulty during the foundation year is handled by the General Student Counseling Unit at the university. Since admission of students to the FOM is based on their performance in the Foundation Year, the Faculty lends great consideration to the courses delivered in that year.Since the new curriculum was launched in 2006/ 2007, the attrition rate of the students from the FOM decreased from 1% in 2005/ 2006 to 0.3% in 2009/ 2010.

2. In the context of data from the Student Self-study and the most recent AAMC Medical School Graduation Questionnaire, evaluate the effectiveness of the systems in place for career counseling, residency preparation, and the selection of elective courses.

The FOM established a career counseling service in the SSU commencing this year 2010/2011. The service will be covered by a full time faculty member supported with a secretarial office in Building-1 of the male section and Building-4 of the female section. Efforts are currently underway to employ these faculties. Two faculty members from the clinical specialties are currently officially assigned to guide the students in choosing their electives. Informal guidance is also always available to the students, which has been rated extremely satisfactory by the students in the focused group discussion.

Career counseling was informally addressed by students seeking advice directly from the faculties they work with. Additionally, over the last 2 years, the university launched an annual career counselling symposium referred to as "Profession Day" whereby students are given presentations by imminent faculty members on the various fields and opportunities available for them to work after graduation. The students of the FOM also arranged a "Career Counseling Day" that was conducted yearly for the past 3 years. These activities, albeit well organized and regular, were considered to be inadequate. Over (40%) of students were dissatisfied with, career assessment activities, information about specialties and alternative careers in medicine, career planning services, and general resources in career planning.

Career counseling service to students has been provided to them on individualized bases upon seeking advice directly from the faculty members they work with. This has been rated as extremely satisfactory by the students in focused group discussion. Additionally, over the last 2 years, the university launched an annual career counselling symposium referred to as "يوم المهنة" or "Profession Day" whereby students are given presentations by imminent faculty members on the various fields and opportunities available for them to work after graduation. The students of the FOM also arranged a career counselling day that was conducted yearly for the past 3 years. The FOM has also recently established a career counseling service within the SSU commencing this year 2010-2011. The service will be covered by a full time faculty member each for the male and female side supported with a secretarial office in Building 1 of the male section and Building-4 in the female section. Efforts are currently underway to employ these faculty members. Two faculty members from the clinical specialties are currently officially assigned to guide the students in choosing their electives for the internship year. Clinical Electives and many Special Study modules are offered to students in the fourth and fifth years (Phase-II), 2 weeks and 2 credit hours each, to allow self directed in-depth learning and exploration of various basic science and clinical fields to assist students in choosing their career and/or remedy any deficiency in a student-selected subject or specialty. Elective modules also offer students opportunities to acquire research abilities, enhance their skills in collection, evaluation, synthesis and presentation of evidence, and to participate in community services. Students on the 4th and 5th year are offered full information on the different elective special study modules through a website designed specifically for the electives and special study modules (http://odus3.kau.edu.sa/med).

3. Evaluate the level of tuition and fees in relation to the size of graduates' accumulated debt, and to the level of financial aid needed and available. Describe the efforts in place to minimize student indebtedness. Comment on the effectiveness of these efforts? Comment on the adequacy and availability of financial education and debt counseling programs.

According to the rules and regulations of the country, no tuition or any other fee is taken from the university students. Lodging and boarding at the university campus is totally free of any charge for all the students. All male and female university students including the medical students receive a stipend of SR1000 every month in addition to an annual stationary and book allowance. Married male students receive an extra allowance of 1000 SR. The number of students who require additional financial support is minimal. A financial aid and debt counselling unit helps and guides students to various available aids and solutions in the form of jobs.

The available efforts are effective as the student questionnaire response did not identify any indebtedness among the student community. As evidenced in the student questionnaire, the financial aids available are adequate and the need for debt counselling is minimal and currently adequate.

4. Evaluate the adequacy and availability of student support in the following areas:
Personal counseling and mental health services, including their confidentiality and accessibility; preventive and therapeutic health services, including immunizations and health and disability insurance; education of students about bodily fluid exposure, needle stick policies, and other infectious and environmental hazards associated with learning in a patient care setting.

The SSU provides multidimensional support to the student body. Social workers attached to the SSU play an active role in the social counseling and support. The unit also utilizes the services of a psychologist/psychiatrist to handle the psychological problems of the students. The SSU has initiated and organised the Mentoring Program of students by the faculty. The mentoring process is likely to further strengthen the academic counselling efforts of the SSU. The SSU is financially supported by the Deanship of Student Academic Affairs.

Services of the SSU are easily accessible, free of any charge and highly confidential. For mental health, two psychology clinics are available (one for male and the other for female students) in the outpatient university clinic where any student facing psychological or mental difficulty can be referred to by the SSU. A strict code of conduct is adhered to in order to maintain confidentiality. The records are accessible to authorized personnel only. Effective mechanisms are in place for follow up to ensure student welfare and to evaluate the quality of services. The effectiveness and relevance of services are monitored through processes which include surveys of student satisfaction which was 60% in 2009/2010.

Before starting the clinical clerkship years, students are oriented about the various risks of exposure to infectious and environmental hazards in the Early Clinical & Communication Skills module in the 3rd year of the curriculum. In the first week of internship, all interns receive detailed education about all important infection control issues including policies related to needle stick and other sharps injury, exposure to blood and body fluids, post-exposure prophylaxis, hand hygiene, the use of barrier precautions (gloves, gowns, regular and high-filtration masks, goggles, face shields), isolation precautions, and sterile techniques. The Infection Control department in the hospital plays an active and effective role in educating the students. Brochures displaying these aspects are also available for students. Starting 2011, all 6th year medical students

will receive "Patient Safety Course" during their Internal Medicine module. This new course will provide students with essential information related to the aforementioned topics.

Preventive and therapeutic health services, including immunizations are covered by the university. Both outpatient and inpatient facilities are available for students. An outpatient polyclinic working 24 hrs a day, 7 days a week is available for the female students in the main female university campus and female dormitory. Another outpatient polyclinic is available for male students inside the university male campus. Emergency and inpatient services for both genders are available at KAUH. Students are administered all required vaccines (Poliomyelitis, DPT, MMR, Hepatitis B, chickenpox) before starting the clerkship years. Influenza vaccine (every year) and quadrivalent meningococcal meningitis vaccine (every 3 years) are also available to students. Baseline TB skin testing and subsequent annual retesting for those with negative reaction is offered to all students and clinical faculties and staff. Clear policies regarding needle stick and other sharps injury, exposure to blood and body fluids, and post-exposure prophylaxis are followed. All health services provided to the students are free of charge as per the rules and regulations of the country. Commencing in 2010-2011, all medical students have medical records opened for them upon enrolment into the FOM and closed upon completing the internship to document all health services, occupational exposures, and interventions provided to students throughout their undergraduate study.

C. Learning Environment:

1. How effective are the medical school and its clinical partners in assuring an appropriate learning environment for medical students? Summarize successes and challenges in supporting positive and mitigating negative influences on students' acquisition of defined professional attributes.

The FOM defined the professional attributes that students are expected to develop; they are included in the program specifications document which is displayed on the FOM website. Students are informed of these attributes through the various courses and clerkships that address these attributes guided by the course learning objectives. The FOM makes every effort to create an appropriate learning environment for students to acquire the defined attributes. Of these attributes are: (a) Practice good standards of clinical care and adhering to the value of practicing within the limits of their competence, and making sure that patients are not put at unnecessary risk. This has been secured by taking actual steps for making optimum use of the CSC so that it becomes part of the formal curriculum scheduleIn addition, a huge budget was allocated for expanding the CSC to be a separate world-class center which provides a sector for standardized and simulated patients; medical education development sector; and clinical skills sector; (b) Maintain good medical practice: by keeping up to date with developments in their field and maintaining their skills through enhancing SDL, Specialized electives, Continuous medical education; (c) Good relationships with patients: by developing and maintaining successful relationships with their patients through provision of courses infusing: communication skills, bioethics, behavioral sciences, and psychiatry [See Appendices File – Section II, Appendix 3 (SII-A3): "Curriculum Map"]; (d) Respect collegiality by working effectively with colleagues from all health and social care professions through provision of assignments which enhance effective team working and leadership skills "Experiential Learning"; (e) Teaching and Training Skills: by enhancing ability of the student to demonstrate appropriate teaching skills as well as their ability to teach colleagues and develop their own teaching skills through the obligatory courses/ or teaching – learning skills courses organized by the medical education department; (f) Honesty: through observation of professional competence during instruction and clerking "Experiential learning"; (g) Health: by increasing the awareness of the students of the health hazards of medical practice and the importance of their own health and the effect that their health has on their ability to practice safely and effectively as a doctor through delivering a course on "Doctor-Patient Safety" in the 6th year.

Channelizing student's time and energy in a constructive manner is facilitated by the curriculum [See Appendices File – Section II, Appendix 3 (SII-A3): "Curriculum Map"], whereby the FOM conduct courses that plant & nurture professional behavior in students, namely: "Foundation Course" in the 2nd year; "ECECS" module in the 3rd year; in addition to Islamic Studies. Professional attributes were previously taught to students in two courses, namely, "Medical Ethics" (fourth year) and "Communication Skills" (third year). During the current academic year (2010-2011), both of these courses are merged into one module called the Biomedical Ethics (Professionalism) module. Professionalism is also inspired and practically inculcated by the role models among the faculty members during the clerkship years. The Freshman Guide to Medical School is available to students to know the attributes and conduct expected from them [See Appendices File – Section III, Appendix 5 (SIII-A5): "Freshman Guide to Medical School"].

Any unprofessional behaviors or attitudes identified are appropriately dealt with by the respective VDBS, clinical affairs, or the Hospital Director to ensure maintenance of appropriate professional behaviors and conduct among the students. Effective tools to evaluate students understanding of professional attributes expected from them include: (a) Scores of students in the above mentioned courses; (b) Results of students' evaluation questionnaires concerning the aforementioned courses. Satisfaction of students with these courses

with regards to their benefit for their future life has been 84% for Biomedical Ethics course, and 72% for Early Clinical Experience & Communiation Skills module.

2. Comment on the effectiveness of school policies for addressing allegations of student mistreatment and for educating the academic community about acceptable standards of conduct in the teacher-learner relationship.

The teacher-learner relationship is clearly defined and posted on the university website. Students' complaints and allegations are reported to the respective Vice Deans who in turn investigate the case and form an ad hoc committee to deal with it according to the circumstances taking into consideration all concerned parties. Based on the results of investigation, remedial actions are taken as needed. The students are free to approach the Dean if they are not satisfied with the response of the Vice Dean.

The newly revamped SSU provides an effective platform for addressing allegations of student mistreatment. In addition, the QAAU is currently working on compiling the policies and procedures practiced in the FOM in one document and formulating some guidelines to help investigation team members accomplish the assigned task according to internal procedures and bylaws of the university.

3. Evaluate the familiarity of students and course and clerkship directors with the school's standards and policies for student advancement, graduation, disciplinary action, appeal, and dismissal. Review the adequacy of systems for providing students with access to their records and assuring the confidentiality of student records.

Standards and policies for the evaluation, advancement and graduation of students are enlisted in the "Freshman's Guide to FOM" and the university's "Internal Policy of Study and Examinations" booklets which are also displayed on the university website [See Appendices File – Section III, Appendix 5 (SIII-A5): "Freshman Guide to Medical School"], and [See Appendices File – Section III, Appendix 21 (SIII-A21): "Student Diciplinary Rules and Regulations"]. These two guides are published in the FOM catalogue. The FOM has requested that the university website displays these two guides. The set of rules which govern the disciplinary actions that may be taken against students is available in the "Students Disciplinary Rules and Regulations" document. The disciplinary action for the first time ranges from a verbal warning to a written notice, a copy of which is to be kept in his/her academic file. Upon repeating the misbehaviour the student will be referred to the Disciplinary Action Team composed of the Vice Deans and chaired by the Dean. The disciplinary action can vary from deduction of the student's monthly allowance for up to one year, to the student being prohibited from attending his/her classes for one or two semesters. This depends on the severity of the issue and the decision of the Disciplinary Team.

Rules are in place for student protection. No disciplinary actions are taken until thorough investigations of the case have been done in the presence of the student and his/her guardian. The investigation panel is chaired by the Vice Dean and includes two faculty members. The investigations are considered legitimate only in the presence of all members of the panel. The decision is made by majority vote and should be approved by the Dean. Appeals to the University President can be made within 15 days of the panel's decision.

The office of the Deanship of Admissions and Registration at the university is responsible for maintaining the student's admission file which contains copies of the high school diploma certificates, good conduct, behaviour certificate, ID copy, and a completed application form. The Academic Affairs Administration at the FOM maintains another file related to the student's attendance, formal correspondence, violations of the rules if any, and disciplinary actions. The student's academic records and exam papers are

maintained by the respective departments and modules. The student records and exam results are available for each student on the ODUS system at the University website. Each student is provided with an ID and a personal password to access and view their grades on the University Website. The students have the right to challenge their grades. A clear cut policy /procedure about the student challenging the examination results has been charted out and published in the FOM catalogue

4. Assess the adequacy and quality of student study space, lounge and relaxation areas, and personal storage facilities. Do available resources for study contribute to an environment conducive to learning?

Adequate study spaces, lounges, recreation and storage facilities are available in both male and female sections. The female section has two restaurants, an adequate computer space in the library, two photocopy centers, one stationary outlet, one day care nursery for female students' kids, one gymnasium center, one celebration room, and 150 personal lockers. In the female section, all of these facilities are located in Buildings (3 & 13). The male section has one restaurant, an adequate computer space in the library, two photocopy centers, two stationary outlets, one gymnasium and recreation center, and 150 personal lockers. In the male section, these facilities are located in Buildings (2, 12, & 13). The hospital restaurant serves both male and female medical students in the clerkship years (4th, 5th, and 6th) and interns.

IV- Faculty:

A. Number, Qualifications, and Functions:

1. Is the current number and mix of faculty appropriate for the attainment of the medical school's mission and goals?

The total number of students per academic year at all levels (2nd to 6th year) ranges from 2000-2425, including transfer or visiting students. In 2008/2009, the total number of full time faculty members (excluding demonstrators) was 270, and the total number of students was 2125, mounting to a faculty: student ratio of approximately 1: 8. In 2009/2010, the total number of full time faculty members (excluding demonstrators) was 292 members and the total number of students was 2025 student mounting to a faculty: student ratio of approximately 1: 7. This ratio is anticipated to improve further by year 2014 to reach 1: 4 to abide by the strategic plan of the FOM which mandates an increase in the number of faculty members by 6%- 9% annually starting 2010 and ending in 2014 to meet the departmental needs . The faculty members teach in courses concordant with their qualifications. Moreover, to ensure the principle of cultural diversity, there is a diverse mix of faculty exhibiting different nationalities, ethnicity, and gender. The number of assisting staff members (demonstrators) was 190 demonstrators in 2008/2009 and 244 demonstrators in 2009/2010. The teachers to students ratio when demonstrators are included (professors, associate professors, assistant professors, lecturers, and demonstrators) is 1: 4. According to the FOM plan, there will be an increase in the number of demonstrators by 4%- 6% annually for the next five years.

The University bylaws define the teaching load of faculty members as follows: for professors, 10 units/week; associate professors, 12 units/week; assistant professors, 14 units/week); lecturers, 16 units/week); demonstrators, 16 units/week). This amount of teaching load for each category is appropriate to cover teaching, research, services and other scholarly activities. The teaching load is reduced if the faculty member is assigned an administrative job in accordance to the university bylaws with a teaching load not less than (3 units/ week). According to the university bylaws, the teaching load of faculty members who are assigned administrative jobs may be reduced as needed but not to less than 3 units/week.

2. Describe and evaluate the availability of opportunities for both new and experienced faculty members (fulltime, part-time, and volunteer) to improve their skills in teaching and evaluation. Is institutional or departmental- level assistance, such as training sessions from education specialists, readily available? What is the level of faculty participation in such programs?

There is an annual approved and publicized training plan for development of faculty skills in teaching and evaluation both at the FOM and University levels. The Department of Medical Education regularly offers or organizes training courses or workshops to improve the teaching and evaluation skills of the faculty members. Some of these activities have a limited seat number and thus only faculty members nominated by the Departments can attend. Other training courses are open to all members to register. A log is available which demonstrates the number and specialties of faculty members participating in each training course and an annual statistics is done for inferential analysis of the extent of training among different faculty categories [See Appendices File – Section IV, Appendix 6 (SIV-A6): "Final Annual Report of the Department of Medical Education 2009/2010"].

Faculty development programs are offered to faculty members by several means [See Appendices File – Section IV, Appendix 5 (SIV-A5): "Calendar of Educational Activities for Faculty Members"]: (A) Locally through an annual calendar issued by both the Medical Education Department at the FOM and the CTLD at the university. The Ministry of Higher Education through the so called "Creativity & Distinction Project" also sponsors or organizes several courses for faculty development in such aspects as e-learning, effective teaching skills, research & statistical analysis, assessment skills, and communication and leadership skills. (B) Nationally through many events addressing development of teaching and assessment skills in medical education; (C) Internationally through invitation of many international figures in medical education from all over the world to conduct workshops to improve medical education skills among faculty members in general and residents and clinical staff involved in instruction, in particular. Examples of such workshops conducted at the FOM include "Teaching on the Run" delivered by, University of Sydney, Australia, "Assessment Strategies" delivered by the University of Illinois at Chicago, "Research Ethics" by Harvard School of Medicine, and "Standardized/Simulated Patients in Medical Education" by both University of Illinois at Chicago and Maastricht University; (D) Many opportunities are available for teaching staff to receive training, either locally or internationally, on specific required fields driven by the strategic objectives of the Teaching/Learning Process in the Faculty. Partnership with the University of Illinois at Chicago gave the FOM an opportunity to train some of the faculty members on standardized patients and simulation which conform to one of the operational projects in the Faculty Strategic Plan. Trained faculty members act as a nucleus for initiating a specialized program in the CSC in an attempt to accomplish teaching in a safe environment aiming at one of the attributes of the educational program "Patient-Doctor Safety". Junior teaching staffs are allowed to have a scholarship to Dundee College to receive the "Essential Skills in Medical Education" course. All of these opportunities and other unmentioned workshops helped fine-tune the teaching skills of the faculty.

The types of training programs offered to the faculty members are based on the results of different formal and informal evaluation of the faculty members' teaching and assessment skills. Problems identified are conveyed to the faculty member who is then directed to the appropriate training programs. A survey performed by the Medical Education Department using a list of topics covering all attributes and competencies that should be possessed by faculty members showed that faculty members need more training in assessment (particularly formative assessment), communication skills with students and feedback, and management and leadership skills [See Appendices File – Section IV, Appendix 6 (SIV-A6): "Final Annual Report of the Department of Medical Education 2009/2010"].

. This was also substantiated by the results of the formal evaluation of courses and instruction team by students where 70% of students reported that they did not receive structured periodic feedback. In their formal evaluation of the courses, faculty members reported that in the clinical years, students are directly given feedback on their performance during the bedside clinical teaching.

The QAAU conducted a survey to evaluate the quality of assessment practice in the FOM. The survey identified areas that need more focused training in the assessment aspect. These included: formative assessment with feedback, constructing case-based and integrated items, conducting OSCE, and the use of student portfolio in assessment. Untill the beginning of 2009/2010, residents were involved in training students without receiving formal training in teaching skills. Consequently, actions have been taken to improve teaching skills of residents involved in teaching students. In 2009/2010, one international, and two local workshops were conducted targeting residents: “Teaching on the Run”, “Tips in Medical Education for Residents”, and “Teaching Communication Skills for Residents”. In 2010/2011, a calendar was issued by the Medical Education Department containing systematic training packages targeting residents and new faculty members. There is an intention to make this program obligatory for all residents and new faculty members

before becoming involved in teaching. Support is given to the Medical Education Department to conduct focused training packages for both junior and senior faculty members as well as for residents.

Participation of faculty members in faculty development programs at the FOM in 2009/2010:

Name of the course	Number of times the course was conducted in 2009/2010	Number of participating faculty members
PBL training program	3	71
Professionalism	2	42
Essential skills in medical education	2	40
Balanced score card	1	31
Assessment by University of Illinois at Chicago	4	87
Teaching on the run by University of Sydney	2	52
Student assessment made easy	2	52
Orientation to coordinators of courses about assessment	39	39
Tips on research methodology work shop	2	50
Medical ethics course by Harvard University	1	43
Clinical investigation and outcome research	1	40
Standardized/Simulated Patients in Medical Education by the University of Illinois at Chicago	1	25
Standardized/Simulated Patients in Medical Education by the Maastricht University	1	25

3. Do faculties receive appropriate support and mentorship related to scholarship? Are formal institutional programs available to support faculty research?

The University provides scholarships which enable graduates to join a variety of international program that include: (a) Master's programs in all specialties, (b) Master/PhD programs and (c) Residency and fellowship training programs. The Vice Presidency for Graduate Studies & Scientific Research in the university has a "Sponsorship Management Department" that provides services to scholars and prepares junior faculty for their scholarships via a formal mentorship program (http://sponsorships.kau.edu.sa/). At the University level, scholarship graduate education programs are overseen by the "Scholarship Department". This department receives information about the scholars' assessment, achievements, progress and difficulties from the Saudi Cultural Attachés across the world, and subsequently informs the Vice President for Graduate Studies & Scientific Research who relay this information to the VDGSSR of the FOM who relay it to the corresponding chairmen of departments. The Advisory Committee of Graduate Students at the university provides logistic support to candidates to overcome obstacles and join international graduate studies by communicating and linking the graduate students with international universities approved by the Ministry of Higher Education (http://graduatestudies.kau.edu.sa/). As of 2010, the FOM has 166 demonstrators on a scholarship abroad; 57% in Canada, 28% in USA, 8 % in France, 5% in Australia, and 2 % in Germany.Scientific research is one of the university's strategic objectives that took priority in the first strategic (from 2007-2012) as well as the second strategic plan (2013 - 2017). Consequently, the university endeavours to secure a convenient environment and resources essential for conducting interdisciplinary

research of high quality. The FOM is keen to align its strategic plan and mission with that of the university. The main goal of the university first strategic plan (2007/2011) was "Academic Advancement" and among its strategic objectives were introduction of research methodology in undergraduate educational programs, consolidation of research infrastructure via increasing fund for research by 10% each year starting 2008/2009 for 3 years, and taking the initiative of "Researcher Development" through training and joint research with international institutions. To align further with the university plan, the FOM established a Research Ethics Unit with an approved "Code for Research Ethics". In 2010 the FOM organized two workshops on research ethics by Harvard School of Medicine and another one on how to publish a scientific paper in high impact journals.

The fifth goal in the university's second strategic plan is to be the “top university in scientific research as regards quality and quantity in the Arab countries according to international classifications”. Each faculty member is expected to produce at least one scientific work annually; publishing at least 50% of the scientific papers of faculty members in internationally classified journals (International System Indexed, ISI). Each Faculty, including the FOM, is requested to organize at least one conference or scientific symposium annually. The strategy also includes establishment of strategic partnerships with internationally renowned scientific and research institutions such as Harvard School of Medicine so as to contribute to development of scientific environment, infrastructure, research outcomes and postgraduate studies programs in accordance with international standards. As a result, the FOM intended to put a “Research Plan” starting from (2012) in its second strategic plan (2013 - 2017); apply the “Staff Research Map” to trace level of productivity of research for each staff member; and increase the incentives for staff members via funding the publication in international journals; and participation in international conferences. Establishment of Clinical Research Unit in collaboration with Harvard School of Medicine is currently underway.

The number of published research in peer reviewed journals over the last 3 years was 166 papers from eight basic sciences departments 21 papers per basic science department, 289 papers from 13 clinical departments 22 papers per clinical department) and 12 papers from the Medical Education Department. The number of research papers verbally presented in local and international conferences over the last three years was 25 papers in 2008/2009 and 29 papers in 2009/2010.

Research funding is secured from various funding sources. The university allocates a separate budget for research to Faculty members. Intramural research funds come from the following sources: the University Deanship of Postgraduate Affairs, the Research and Consultation Institute, the scientific chairs (to date 9 chairs), and Centers of Excellence (to date 3 centers). The Ministry of Higher Education also provides extra-budgetary funds for approved Developmental Projects. The Center for Research and Consultation at the University assists faculty members to secure exramural research funds from various sectors such as King Abdulaziz City for Science and Technology, governmental and private sectors, and non-profit organizations. The center also supports faculties who want to establish Scientific Chairs or Centers of Excellence through communication and advertisement of their research projects to the appropriate parties.

Nine Scientific Chairs are currently available to conduct research in specialized fields as follows:

- Sheikh Mohammed Hussein Al Amoudi Chair for Viral Hemorrhagic Fever
- Colorectal Cancer Chair
- Sheikh Mohammed Hussein Al Amoudi Chair for Diabetic Foot Research
- Sheikh Mohammed Hussein Al Amoudi Chair for Breast Cancer
- Sheikh Mohammed Hussein Al Amoudi Chair for Biomedical Practice Ethics
- Salem Bugshan Chair for Alzheimer's Disease

- Ahmad Hasan Fetaihi Chair for Prostate Disease Research
- Abdullah & Saeed Bin Zager Chair for AIDS Research & Control
- Alzamil Chair for Cancer Research

Three Centers of Excellence have also been established, namely:

- Center of Excellence for Osteoporosis Research (CEOR) at King Fahad Research Center (http://ceor.kau.edu.sa).
- Princess Aljawhara Center for Excellence in Research of Hereditary Disorders (http://al-jawhara-center.kau.edu.sa).
- Sheikh Mohammed Hussein Al-Amoudi Center of Excellence in Breast Cancer (http://alamoudi-breastcenter.kau.edu.sa)

King Fahad Medical Research Center has been established in 1980 to provide financial, technical, and logistical resources to conduct medical research. These resources include 18 highly equipped laboratories, Special Infectious Agents Unit that has a biosafety level 3 microbiology laboratory for special infectious pathogens, Clinical Trial Unit, Hematology Research Unit, Genome Unit, electron microscopy unit, gene sequencers, animal house, animal operation room, a library, class rooms, and a large auditorium. The research plan in this center comprises five core research areas based on community needs which include: infectious diseases, metabolic diseases, cancer, genome, and nutrition.

Establishment of research data base for faculty members has recently been initiated to serve as an objective indicator for measuring and evaluating the competence of the research process. This data base is helpful in determining the following indicators: percentage of joint scientific research with international scientific institutions, number of faculty members who won national or international prizes for their research activities, and the number of applied researches utilized by service institutions in the community.

The university motivates faculty members to conduct research and publish their papers in reputable international journals with high impact factor through monetary rewards of up to SR 500,000.00 (US$ 133,000.00). The faculty also encourages and fully sponsors faculty members to present their research in national and international conferences.

The university and FOM have also provided faculty members training courses on research methodology. For instance, in 2009/2010, three international workshops with Harvard School of Medicine, and two local workshops were offered to faculties. Additionally, the CTLD at the university offers many courses to improve research skills.

B. Personnel Policies:

1. Evaluate the systems for the appointment, renewal of appointment, promotion, granting of tenure, and dismissal of faculty members. Are the policies clear, widely understood, and followed?

Appointment, renewal of appointment, promotion, and dismissal of faculty members, follow the bylaws and regulations set by the Higher Education & Universities Council [See Appendices File – Section I, Appendix 4 (SI-A4): "Higher Education & Universities Council Bylaws & Regulations"]. These are regulated by codes for appointment and renewal (code 1- 20), promotion (codes 21- 36), as well as dismissal and other disciplinary actions (codes 82- 92). All of these policies are clear, well and widely understood, and strictly followed. These policies are available in a booklet format and also electronically on the university website.

Appointment as Assistant Professor, Associate Professor, and Professor is a lifetime employment (tenured) for all, ie faculty members appointed in any of these positions have the right not to have his or her position terminated without just cause. Appointment in any academic position (Demonstrators, Lecturers, Assistant Professor, Associate Professor, and Professor) has to be approved by a series of committees and councils. Most applicants for academic post apply in the departments of interest for demonstrator jobs after their graduation from the FOM. The applicants have to fulfill certain criteria to have the request approved by the department; this includes a minimum graduation grade of "Very Good" (at least 80%). The applicants have to be inerterviewed by a departmental committee which selects the best applicant(s) for the available position(s). The committee's recommendations have then to be approved by the Department's council, after which, they are submitted to the faculty council for approval. The recommendations are then submitted to the University's standing Committee for Lecturers and Demonstrators Affairs presided by the Vice President for Graduates & Scientific Research for approval, following which, they are submitted to the University Council for final approval. For basic science positions, demonstrators have to obtain a higher degree such as Master degree in their field to be appointed as lecturers and PhD to be appointed as Assistant Professors. For clinical science, demonstrators have to successfully complete a full residency training program and pass the certifying examination in the field they are appointed for, and have at least two publications to be appointed as Assistant Professors. Demonstrators have to obtain a higher degree and be promoted to lecturer or assistant professor within 7 years after appointment.

Promotion from Assistant Professor to Associate Professor or from Associate Professor to Professor is conditional on certain criteria including a minimum period of 4 years, publications of a predefined number of papers in peer reviewed journals, and approval from the Department's Council (code 26) to confirm compliance to the promotion requirements and procedures, the Faculty's Council (code 26), and the university's Scientific Council (code 28). All scientific publications of the applicant are evaluated by 2-3 national and international referees who then submit their recommendations to the scientific council to indicate as to whether the applicant's scientific production is robust and up to the required standards to be accepted for promotion. The Scientific Council takes the final decision based on clear and specific rules (codes 27- 37).

Dismissal and disciplinary actions are governed by a Disciplinary Committee presided by one of the Vice Presidents and composed of a dean (not part of the investigating team), a professor, and a member specialized in Islamic law. This committee proposes the judgment according to specific procedures set in code 88 and the final judgment is taken by the University Council. The convicted staff member could contest on the judgment according to clear rules described in the code 88 of the bylaws.

Academic leaders are selected on the basis of objective documented criteria based on scientific activities, managerial and leadership skills, contributions in students' activities and services, participation in quality and

development, an academic file which showing integrity and commitment, and professional collegiality with colleagues, employees and employers.

2. Assess the adequacy of institutional and departmental conflict of interest policies relating to faculty members' performance of their academic responsibilities.

There were no written policies in the FOM to regulate conflicts of interest even though they were practiced by faculty members according to the known international rules and standards. This was identified as an area for improvement at the beginning of the self study for LCME accreditation. As a result, an ad hoc committee was formed to set up a code for conflict of interest on 30 December 2009. It focused on three aspects of conflict of interest: conducting research; private interests of faculty with academic responsibilities; and in commercial support of continuing medical education. The code was developed and approved by the Faculty Council #4 in December 2010). The proposal was submitted to the university administration for approval which is still pending.

3. Describe the extent of feedback provided to faculty members about their academic performance and progress toward promotion and/or retention. Are faculty members regularly informed about their job responsibilities and the expectations that they must meet for promotion and/or retention?

The academic performance of the faculty members is monitored and evaluated using the "Academic Portfolio" which is mounted on the ODUS accessed easily by each faculty member using a username and password. The portfolio is filled by the faculty member online and could be printed as a hard copy. It is then delivered to the chairman of the department for verification, assessment, and approval. It is the policy of the university that the department chairmen use the portfolio for assessing the academic performance of faculty members including: teaching activities, research, and community services. The chairmen of departments provide oral feedback to the faculty members and submit the approved academic portfolio to the respective vice dean every six months. To ensure assessment of the academic performance of faculty, a format is designed by the QAAU to be used by the academic leadership (chairmen of departments, vice deans, and dean) to evaluate the faculty members. The format assesses the faculty as regards the following aspects: competence as an educator, research activities, his/her role in quality enhancement, his/her role as a leader, and other generic skills. Matching of evaluation of staff members using the academic portfolio and the format will be performed to triangulate the evidence. This would be followed by an oral and written feedback to the faculty and the chairmen of department.

The faculty members' performance is also evaluated by students at the end of each course; however, this is done as a part of evaluating the instruction team. Serious endeavours are taken to allow evaluation of individual faculty members by students. A draft of the evaluation questionnaire has been designed by the QAAU and is currently undergoing validation. Results of analysis of evaluation questionnaires are reported to the course coordinator, who discusses it with the faculty members in the course committee meeting to develop an improvement plan for the course. Through this formal feedback, each faculty member identifies his/her training needs to improve and develop their teaching proficiency.

Faculty members are informed about their job responsibilities and expectations that they must meet for promotion and/ or retention through many routes: (a) the bylaws and regulations set by the Higher Education & Universities Council; (codes 3- 14 and 38); (b) departmental meetings; (c) Faculty Council meetings.

4. Discuss the extent to which education is valued in the institution. How are the degree and quality of participation in medical student education factored into decisions about faculty retention and promotion?

Promotion of faculty members occurs according to three criteria: Scientific research and scholarly activities; teaching activities; and University and community services (Codes 25- 27). Reports from the department and Faculty councils concerning all three aspects including reports on the faculty member's teaching activities, are submitted to the Scientific Council. Evaluation of the faculty member's activities submitted for promotion occurs out of 100 divided as follows: 60 points on scientific research; 25 points on teaching activities; and 15 points on university and community services. Criteria for evaluating teaching activities are set by the University Council based on recommendations from the Scientific Council.

The academic portfolio, evaluation reports, and focus group interviews with the students' leaders are taken into account by the academic leaders for evaluating the teaching activities of faculty members. However, evaluation of performance is not used to decide on retention or dismissal of faculty members. It is rather considered as a means to identify developmental needs of their teaching proficiency skills and guiding staff members to targeted training.

C. Governance:

1. Evaluate the effectiveness of mechanisms for organizational decision-making. Are necessary decisions made in a timely and efficient manner with appropriate input from faculty and other concerned parties? Describe and assess the relative roles of committees of the faculty, department heads, and medical school administrators in decision-making.

Faculty members are involved in the decision-making process through departmental councils, various committees, and the Faculty Council. Committees have fair representation from basic science and clinical faculty. Decisions made at several levels of the FOM are formally approved by the Faculty Council, which is the supreme academic body. Nominations for membership on various committees are invoked by the dean's office and the committees have balanced representation from both junior and senior faculty. All departments and committees have independence in decision making. The Dean is assisted by 6 vice deans (VDBS, VDCA, VDHD, VDGSSR, VDQD, VDFS) as well as the chairmen of departments. This comprises the Leadership Forum, which formulates and executes various faculty policies. In addition, various standing and ad hoc committees appointed by the dean report back to the Leadership Forum and the Faculty Council. Thus the decision-making involves leaders and faculty members at all levels of the organization.

2. Assess the effectiveness of the methods used to communicate with and among the faculty. Do faculty perceive themselves to be well informed about important issues at the institution? Do faculty believe that they have sufficient opportunities to make themselves heard?

All important information concerning the FOM, the hospital, or the university are communicated to faculty members through written circulars, memos, publications, electronic communications through the ODUS system, e mails, LCD screens widely available in the various buildings and the hospital. A file referred to as "Consultant's File" that includes all important memos is available in each department in an accessible location for faculty members to view any time. Faculty members have ample opportunities to make themselves heard through direct communication with the chairmen of the departments, vice deans or the dean. Faculty members have the right to request discussion of any issues or concerns they have in the departmental council.

V- Educational Resources:

A. Finances:

1. Discuss the stability of and the balance among the various sources of financial support for the medical education program and school (i.e., state and local appropriations, income from patient care, endowments, tuition income, research income, hospital revenues). Discuss the implications of any downward trends in specific revenue sources. Describe the financial prospects for the medical school over the next five years? Are there any departments in financial difficulty? Are there systems/policies in place to address departmental financial difficulties?

King Abdul Aziz University's budget is fully secured by the government. The FOM receives a budget for three main separate functions, namely, the FOM core operation, KAUH, and research. However, donations and gifts are encouraged. The latter are particularly directed towards community services and research through sponsoring centers of excellence, scientific chairs, and research projects.

The annual budget for the FOM has steadily increased over the last three years [See Appendices File – Section V, Appendix 1.3 (SV-A1.3): "Budget of the FOM"]. This occurs within a framework of long-term revenue and expenditure projections which are regularly adjusted. Budget proposals are developed by senior academic and administrative staff in consultation with cost center managers.The proposals are presented to the governing body for approval. Consequently, the FOM does not encounter any major changes in its budget that might lead to current or potential fiscal imbalance. As a result, the FOM's educational program is not endangered by any anticipated under-financing.

Departments usually have no major financial difficulties or worries as their financial needs are anticipated and accounted for in advance. Any financial needs for all departments are met and compensated for through adjustment of the Faculty budget. Minor ad hoc needs get fast tract coverage through the Dean's office. Financial carry-forward provisions are sufficiently flexible to avoid rushed end of year expenditure or disincentives for long term planning.

The FOM is also taking additional steps to ensure continuous extra financial support from sources other than the universiy pool by establishing a private health section at KAUH. A portion of this income is spent to maintain the hospital.

2. Comment on the degree to which pressures to generate revenue (from tuition, patient care, or research funding) affect the desired balance of activities of faculty members. What mechanisms are in place to protect the accomplishment of the educational mission?

Since research and patient care have their own separate budget secured by the university, there is no concern that the educational program may suffer from undue productivity pressure on faculty members as regards research or patient care. Moreover, the private sector in the community contributes to research by funding centers of excellence, scientific chairs, and other developmental projects. Such contributions enter the university financial pool, and the university administration organizes expenditure and utilization of these contributions.

Clinical faculty members are legally entitled to have their own private clinics but only after the working hours to avoid any interruption of the educational mission.

In addition, any increase in students' enrollment is always prepared for by the government which increases the allocated budget to cope with the increased number of students..

3. **Describe how the school has positioned the clinical enterprise (faculty practice plan/organization and structure of healthcare system) for best results in the local health care environment. Is planning related to the clinical enterprise occurring? How effective are these plans in meeting institutional goals?**

University hospitals are one of several other sectors (Ministry of Health facilities, National Guard facilities, Armed Forces Hospitals, Security Forces Hospital, and King Faisal Specialist Hospital & Research Center) that provide health care services free of charge to Saudi citizens. In contrast to other health care sectors, however, KAUH also provides free health care services to non-Saudi nationals, thus enhancing the variety of diseases and load of patients encountered by students and faculties. The budget of the FoM and KAUH is entirely secured by the government through the main budget assigned to the university.

KAUH administration took further steps to raise hospital revenues through the expansion of the private section at KAUH, a proportion of which spent for hospital running cost and maintenance. In addition, the university lately took steps in fund raising through establishment of the "Medical Experts Home" to innovate developmental projects in the educational and professional medical aspects inside and outside the university aiming at fund-raising by investing the physical and human resources available in the FOM.

4. **Describe how present and future capital needs are being addressed. Is the financial condition of the school such that these needs can be met?**

Both present and future financial needs of the school are fully met and secured by the government in advance through a five years prospective plan. Proposal of the required budget is usually submitted by the FOM through the university president to the Minister of Higher Education to be approved and dispensed in a time frame that is appropriate for the need and scheduled plans. Accountability is always made for emergency needs to assure that the medical school does not have any financial strains that may have any major impact on its educational mission.

B. General Facilities:

1. Evaluate the adequacy of the general facilities for teaching, research, and service activities of the medical school. Are the opportunities for educational excellence or educational change (e.g., introduction of small group teaching, opportunities for active learning) or for the attainment of other medical school missions constrained by space concerns? Describe the likelihood that needed space or space upgrading will be available in the near future. Have enrollment increases led to space constraints? If so, how are these constraints currently being addressed?

The FOM possesses two mirror-image sections, each for male and female medical students. The institution has adequate facilities for teaching, research, and service activities. The space and design of facilities are appropriate to the nature of the school's activities and in proportion to the number of students. The infrastructure designed at the time of inception of the medical faculty was for student strength of 250 students each on the male and female side. Adequate building space, open space and lecture halls are available for 250 students each on the male and female side. There are 9 lecture halls of different capacities available exclusively for the FOM. The maximum capacity of two of these lecture halls is 250 studnets each. The seating capacity in the male and female sections is 4 and 3 times the required capacity, respectively. All 9 lecture halls are well equipped with LCD projectors, microphones, and have two or more entrances. On the male and female side 25 rooms on each side serve the smooth conduction of PBL sessions. At present 350-400 students are enrolled into the FOM each year. Exam halls are secured in separate buildings and meet the criteria for exam seating.

The CSC at KAUH is well equipped and used by students to learn clinical and procedural skills and also for peer to peer and self directed learning. The clerkship evaluation questionnaires showed that 93% - 96% of the students agreed that the CSC is very well equipped and helps them be exposed to clinical cases that they miss and to use it for peer to peer and self directed learning. The CSC provides infection and hazard free safe teaching environment for students, graduates, and faculty members; live transmissions of surgical operations from the hospital digital operation rooms to the CSC facilitate the educational mission and reduce overcrowding in the Operation Room (OR). A plan has recently been approved and a land and budget allocated to construct a separate state of the art multi-storey building dedicated solely as a CSC.

2. Discuss the adequacy of security systems on each campus and at affiliated sites.

Safety and security measures are available in all the facilities; these include clear signs and maps that are posted to guide appropriate evacuation and plan of action in case of emergencies. International emergency coding system is used. In addition, safety measures in educational facilities are available; these include: availability and accessibility to fire dumping equipments near the halls (fire extinguishers, water sprinkles, water source, fire rubber tubes which are checked regularly, and smoke alarm devices). Emergency drills constitute a point which requires further improvement to conduct them more regularly and to cover a wider scope of the institution personnel. Safety is also secured through regular maintenance of facilities and infra structure.

C. Clinical Teaching Facilities:

1. Analyze the resources for clinical teaching available to the medical education program. For the size of the student body, are there adequate numbers of patients and supervisors available at all sites? Has the school needed to expand its clinical teaching network to address either expanded enrollment or decreased patient volume? Is the patient mix appropriate? Are clinical facilities, equipment, and support services appropriate for exemplary patient care? Discuss the availability, quality, and sufficiency of ambulatory care facilities for teaching.

KAUH is the main teaching site of the FOM. Additionally, the FOM utilizes various other teaching sites including some selected Ministry of Health facilities (King Fahad General Hospital, King Abdul Aziz Hospital & Oncology Center, Maternity and Children Hospital, Mental Health Hospital, and primary health care centers), King Khalid National Guard Hospital and primary health care centers, King Fahad Armed Forces Hospital, and King Faisal Specialist Hospital and Research Center. As a result of the steady expansion of KAUH reaching in year 2010 up to 704 inpatient beds (expandable to 847 beds) and 136 ambulatory beds and the presence of fully equipped CSC, the departments of Internal Medicine, Surgery, and Obstetrics & Gynecology, have been teaching 4th, 5th, and 6th year students only at KAUH commencing 2010. However, the Department of Pediatrics still utilizes also the Maternity & Children Hospital (Ministry of Health) to teach clerkship students for more exposure to clinical cases. The number of patients who serve as teaching cases and the extent of exposure to bedside teaching for each student is similar in various teaching sites; where the ratio of exposure of students to teaching beds in different teaching sites ranges from 2-3 beds per student per day for any clinical rotation.

The FOM has strong autonomy and control over instruction, training and evaluation of students and interns at KAUH since the hospital is presided by the Dean and the VDHD. The hospital has an inpatient bed capacity of 704 beds (expandable to 847) and 136 ambulatory beds. It was accredited by the Canadian Council for Hospital Accreditation for the period 2009-2012. The hospital serves a wide variety of patients from the cosmopolitan city of Jeddah and adjacent cities and pilgrims coming from all over the world to perform Hajj (Islamic Pilgrimage), thus drastically broadening the varieties of diseases and patient races the students and faculty members are exposed to which enhances their clinical experience.. Clerkship evaluation questionnaires showed that 91% of the students agreed that the assigned types of clinical cases are adequately available, and 87% of them agreed that their number is adequate at KAUH. The total seating capacity of the teaching classes in the hospital in relation to the number of students in the three clinical years is around 1.8 times the required capacity. In view of the recent expansion of KAUH to 704 beds and the presence of a fully equipped CSC, most clerkships (Internal Medicine, Surgery, Obstetrics & Gynecology) are only taught at KAUH and no longer in the affiliate hospitals as of the academic year 2010/2011. The Pediatrics and Psychiatry clerkships still use the Maternity & Children Hospital (Ministry of Health), and Mental Health Hospital (Ministry of Health), respectively, for better exposure to clinical cases, however, teaching and evaluation are conducted by faculty members from the main campus to ensure equal opportunities of quality of teaching and assessment among students. Affiliate hospitals are used also as teaching and training sites for interns (7th year students). Training and evaluation of the interns in these affiliated hospitals is carried out by their own staff who are made aware of the learning objectives and evaluation technique using a standardized form for each internship rotation to ensure consistency with the main campus. KAUH was constructed according to the international standards. It contains 5 specialized intensive care units, male and female wards for general specialty and subspecialty as well as multiple other sub-specialized day care units such as endoscopy, oncology, and extra-corporeal shockwave lithotripsy (ESWL) that are fully equipped to aid teaching. The emergency department of the hospital works round the clock receiving all kinds of emergencies. The operating room (OR) in the

university hospital harbors (16) large operating rooms, half of them are digital (OR-1) fully equipped with advanced and updated technology including the Robot technology and electronic scheduling system. Plans for further expansion and upgrading of all services are in place and receive full support from the higher administration. All medical and surgical specialties and subspecialties are available in the hospital and supervised by highly qualified faculty members and hospital staff.

Ambulatory care constitutes a major site for teaching. KAUH and the other 4 main Ministry of Health hospitals collectively have extremely high load of patients. For instance, in 2009, the the load of patients at KAUH and the other 4 Ministry of Health hospitals was collectively 412,605 visits in the outpatient department and 211,513 visits in the Emergency Room. In addition to these hospitals, ambulatory patient care training is also acquired by the students during rotations in the various Primary Health Care Centers. These peripheral centers are under direct supervision and administration of the FOM academic staff.

The CSC plays a major role in maintaining and promoting the acquisition of clinical skills by the medical students and other health care professionals. It consists of 40 rooms equipped with over 100 task models and manikins as well as other high technology facilities to aid practical and clinical skills training. A state of the art CSC in a separate multi-storey building has recently been approved to be established beside the hospital.

2. Describe and evaluate the interaction between the administrators of clinical affiliates used for teaching and the medical school administration. Does the level of cooperation result in a smoothly operating and effective clinical education program?

As of 2010/2011, the main clerkships do not use hospitals other than KAUH for teaching, except for Pediatrics, and Psychiatry clerkships where the number and variety of cases at KAUH are inadequate to fulfill the learning objectives. Prior to 2010, the FOM used several hospitals as teaching sites including some selected Ministry of Health facilities (King Fahad General Hospital, King Abdul Aziz Hospital & Oncology Center, Maternity and Children Hospital, Mental Health Hospital, and primary health care centers), King Khalid National Guard Hospital and primary health care centers, King Fahad Armed Forces Hospital, and King Faisal Specialist Hospital and Research Center. All of these hospitals are accredited by the Saudi Commission for Health Specialties (SCHS) as training sites for residency and fellowship programs. Agreements of affiliation between the FOM and administrators of clinical affiliates used for teaching demonstrate terms of reference that specify the role of the main and affiliated hospitals in the educational process as regards consistency of topics and their objectives. Coordinators from the main campus assess these sites regularly regarding the availability of teaching beds, average occupancy rate, average time of stay, as well as the availability of specialized doctors who are capable of instructing the students with quality comparable to that received in the main campus.

3. Describe and evaluate the level of interaction and cooperation that exists between the staff members of the clinical affiliates used for teaching and medical school faculty members and department heads, related especially to the education of medical students.

Communication between academic staff in the FOM and their counterpart colleagues at the affiliating hospitals takes place both at the personal and administrative levels to ensure smooth delivery of the educational objectives. Emphasis is laid to ensure exposure of students to patients with the predefined variety of diseases. Teaching and evaluation of the 4th, 5th, and 6th year students in the affiliated hospitals is carried out by faculty members from the main campus, whereas training and evaluation of the interns in these affiliated hospitals is carried out by their own staff who are made aware of the learning objectives and evaluation technique for each internship rotation to ensure consistency with the main campus. Direct friendly

communication takes place between faculty members from the main campus teaching 4th, 5th, and 6th year students in the affiliate hospitals and the staff members of these hospitals who are involved in training the interns.

D. Information Resources and Library Services:

1. Evaluate the quantity and quality of the print and non-print holdings of the library as a resource for medical students, graduate students, and faculty members.

The FOM has two main libraries, one in the male section and the other in the female section. Both of these libraries are linked electronically to the main university library via network connection. There is also a library in the hospital, another one in King Fahad Medical Research Center, and small libraries in most of the departments. The total number of electronic books is 114,000 and of the electronic journal databases is 40 databases. There are 15,300 print books in the male section and a similar number in the female section. The hospital library has 10,000 books. The library holdings are reviewed annually to ensure availability of updated books and journals. All students, upon admission, and staff, upon employment, are provided with a user name and password to have a full access to electronic versions of textbooks and scientific journals. A significant budget is allotted every academic year for the libraries. Evaluation of the library by medical students showed that 75% of them were satisfied or very satisfied with the library services.

2. Comment on the adequacy of information technology resources and services, particularly as they relate to medical student education. Are resources adequate to support the needs of the educational program? Are the information systems of the medical school and major clinical affiliates sufficiently well integrated to assure achievement of medical school missions? Note any problems, and describe any plans in place to address these problems.

The Faculty electronic library is well equipped with a large number and a wide range of scientific and medical journals and books. The total number of electronic books is 114,000 and electronic journal databases is 40. It is an adequate resource for study and research to all students, academic staff and employees. The electronic library can be accessed through the internet from home or elsewhere at any time using the user name and password assigned to each student and faculty member. It can also be accessed in the campus through a wireless internet available in most buildings. Selected articles or chapters of text books can be easily downloaded free of charge.

Interns and academic staff also have a password-guarded access to patients' medical records including laboratory and imaging data in the hospital. Availability and accessibility to electronic resources by students and faculty members help enhance the quality of the courses content due to the continuous accessibility to updated information. In addition, it enhances the accomplishment of the teaching strategies of the curriculum as the available information technology and library services motivate both students and faculty members to enhance self-directed and electronic learning, student-centered learning, searching skills, retrieval of information, and evidence-based medicine practice.

3. Evaluate the usability and functional convenience of the library and of information resources. Are hours appropriate? Is assistance available? Is study space adequate? Are resources, such as computers and audiovisual equipment adequate? Can students access information from affiliated hospitals or from home?

The library is open from 8:00 to 22:00 (14 hours). Electronic access is available from anywhere 24 hours a day, 7 days a week. Wireless internet access is also available in most buildings in the campus. The seating capacity of the library in relation to the total number of users per day in both male and female sections is adequate 4: 1. A librarian and other library employee are available for any assistanc. The electronic library in the main campus can be accessed through the internet from home, affiliated hospitals, or elsewhere at any

time using the user name and password assigned to each student and faculty member. It can also be accessed in the campus through a wireless internet available in most buildings.

The number of available computers in the main library is adequate in relation to the number of daily users (students, faculty members, and postgraduate students) with a ratio of one computer to five users (1: 5). Each faculty member is provided with a desktop computer in his/her office that is linked to the faculty and university network as well as a laptop to facilitate delivery of lectures and tutorials at any time and overcome any technical mishaps which could occur in the lecture halls or small group learning classes.

4. **Assess the contributions of library and information technology staff to the education of medical students and the professional development of faculty members in the following areas: Teaching specific skills, such as instruction in computer usage and bibliographic search. Retrieving and managing information. Interaction with the curriculum committee to coordinate various library and information resources with planned curricular design.**

Professional development of the faculty members and other employees in the field of information technology is taken care of by the CTLD and the Deanship for Libraries Affairs at the university, which conduct regular workshops for training staff members and students in computer usage, bibliographic search, and retrieving and managing information.

The role of library and IT unit staff in the orientation and education of medical students and professional development of faculty members was found to be suboptimal. Efforts are in progress to recruit more personnel in the libraries and information technology to improve utilization of the available resources. On the other hand, efforts to involve library supervisor in matching various library and information resources with the planned curricular design started by matching the library holdings and electronic database to the required learning resources defined by course coordinators.

Strengths and areas that need improvement

I. INSTITUTIONAL SETTING A. Governance and Administration
Points of Strength
1. The FOM pursued strategic planning based on scrupulous internal and external environmental analysis; as a result, the gap between the current status and the anticipated vision was identified, and the mission and the strategic objectives of the FOM were formulated.
2. The FOM possesses an organizational structure that is compatible with its size and type of activities and that secures the accomplishment of its mission, and strategic objectives through a free network among the FOM administration and the University.
3. There is a free network among the FOM administration and the Health Faculties in KSA and the Gulf Region; thus ensuring cohesive interactions and effective performance.
4. The FOM has a competent leadership that adopts developmental thinking and strives for excellence, in addition to its capability of setting the policies for that purpose.
5. The leadership of the FOM takes appropriate decisions in a time frame that is appropriate for securing efficient and effective institutional performance.
6. The FOM shows satisfactory academic leadership stability which secures the effectiveness of the institutional functioning.
7. Establishment of a QAAU to ensure delivery of high quality medical education through a comprehensive and continuous evaluation and feedback system in the FOM.

I. INSTITUTIONAL SETTING B. Academic Environment
Points of Strength
1. Graduate studies have a variety of tracks with adequate funding sources and multilevel regular and systematic review of the programs.
2. The noticeable increase in the number of graduates enrolled in the master programs of the FOM is expected to have a positive impact on research and undergraduate education.
3. The available residency programs cover all specialties through a variety of tracks. Quantitative indicators indicate that the running programs are effective.
4. All residency programs are overseen and accredited by the SCHS that conducts regular and systematic review and accreditation of all programs every two years.
5. Students and graduates participate in optional or obligatory CME programs. It has been proposed that medical students should be certified in ACLS (delivered by the American Heart Association) before the internship year; this proposal is currently under consideration
6. The FOM enlightened by the university's and its strategic objectives, reviewed and updated the undergraduate educational program to include instructions and training on research methodology.
7. The Faculty established international partnerships with Harvard School of Medicine to initiate a Clinical Research Support Unit; and checked all its research infrastructure and resources to optimally use them in implementing its second strategic plan in 2013.
8. The Faculty and the university secure intramural as well as extramural research resources including 9 scientific chairs and 3 centers of excellence to ensure an optimal research environment.
9. Medical students' participation in research occurs through structured funded research projects and other research opportunities.. Students are informed about such research participation opportunities through a variety of means.
10. Medical students' participation in "Service Learning Activities" occurs either optionally or obligatorily during certain course with funds secured from various sources.
11.The Centers of Excellence and Scientific Chairs have been supporting students to be involved in research. Further, the FOM is currently establishing an undergraduate research unit supervised by the Vice Dean for Graduate Studies & Research.

12. The FOM driven by its Islamic values succeeded in achieving diversity in nationality, ethnicity, and gender categories among medical students, faculty, and staff.	
Areas that need improvement	**Intended Action/ Action Taken**
1. There is a limited size of local graduate programs.	Encouraging departments to innovate Master's and Doctoral degrees. As a result, 3 Master's programs in: Ophthalmology, Pediatrics, and Medical Genetics, as well as 3 Doctoral Programs in: Pathology, Pharmacology, and Physiology have been proposed and approved.
2. Contact of graduates and residents with medical students through instruction sessions takes place without adequate training in teaching skills.	– Systematic training packages targeting residents and new teaching faculty members are offered and intended to be obligatory before becoming involved in teaching. – CME hours are allocated to this program to motivate residents and new faculty members to participate in these activities.
3. The contribution of basic and clinical sciences to research is comparable taking into consideration the number of departments in each. However, the research productivity of individual faculty members is not objectively monitored.	– Research will represent a priority strategy in the second strategic plan (2013/2017) – The Faculty intends to apply the "Staff Research Map" to trace level of productivity of research for each staff member

II. EDUCATIONAL PROGRAM

Points of Strength
1. Program objectives serve as effective guides for educational program planning and for student and program evaluation.
2. The level of understanding of the school-wide objectives of the educational program among administrators, faculty members, and students is satisfactory.
3. The educational objectives are linked to the physician competencies expected by the medical profession and the public.
4. There is an effective mechanism in place for assuring that all students encounter the specified types of patients/clinical conditions needed for the clinical objectives to be met.
5. The Clinical Skills Center is an important asset to medical education. It also helps students to make up for non-encountered assigned clinical cases.
6. There is a continuous periodic review process which ensures that the educational program provides a general professional education that prepares students for all career options in medicine.
7. There is a balance between the knowledge, skills, and attitudes components of the program, which qualifies graduates to all career options in medicine.
8. The content of the provision is comprehensive and interrelated. It is conforming to the program objectives, expected graduates' attributes, and required employability skills in the healthcare market.
9. The planning of the sequencing of courses within the program is periodically evaluated by the QAAU as part of the Annual Educational Program Evaluation Report. Results are discussed in the MCC and actions recommended to each course coordinator individually through the respective vice dean.

10. There is progressive increase in the number of graduates enrolled in various postgraduate studies and accredited residency training programs in all clinical specialties which suggests effectiveness of the educational program.
11. The instructional opportunity for students to engage in active learning and independent study is adequate and secured through a variety of methods such as scheduled hours for SDL, PBL, tutorials, electives, clerking, simple research tasks, and EBM assignments.
12. The recently increased bed capacity and the presence of a well equipped CSC virtually eliminated the need to use affiliate hospitals as teaching sites and hence, better control of the main campus over the teaching and assessment experience of the students.
13. There is a satisfactory balance between inpatient and outpatient clinical experiences and between clinical experiences in primary care and specialties.
14. There are assessment policies that organize the assessment practice in the FOM and emphasize the use of continuous and final, as well as formative and summative assessments.
15. A variety of assessment methods are used to ensure assessment of knowledge, clinical skills, procedural skills, and attitudes. Assessment is either structured and objective such as MCQ exams and OSCE, and/or in the form of short essay questions and long cases.
16. The curriculum as a whole and its component parts are regularly and systematically reviewed through effective procedures which identify and rectify any problems.
17. Effectiveness of curriculum planning is ensured by a strong curriculum management structure at all levels providing evidence for integrated institutional responsibility for the curriculum. There is an effective system to ensure that issues detected during reviews are discussed and remedied.

Areas that need improvement	**Intended Action/ Action Taken**
1. Even though the level of understanding of the school-wide objectives of the educational program among stakeholders is satisfactory, there is still a need to increase the awareness of the junior and new teaching staff about these objectives.	Efforts are being exerted by departments to disseminate the program objectives to junior and new teaching staff through meetings and structured training packages aiming at familiarizing them to the program objectives and the significance of aligning them to their instruction and assessment practice.
2. Treating the gaps for students who, for any reason do not encounter certain clinical cases, does not follow a structured predetermined plan.	– A committee has been formed for the proper and optimum structured utilization of the CSC by all courses and clerkships. – The curriculum committee for phase-II is developing a mechanism for structured remedial actions for gaps resulting from missing any assigned key clinical cases by any of the students.
3. The University foundation year (1st year) was evaluated by the second year students as being inadequate to prepare them for their medical studies. Deficiencies identified in second year medical students who matriculated from the foundation year were traced to teaching of the medicine-specific preparatory courses by non-medical faculties outside the campus.	– "Foundation Course" delivered by the FOM was introduced in the 2nd year to prime students to the medical field. – The FOM revised all courses given to students in this year and made essential changes to ensure better preparation of the students for the medical curriculum.
4. Most assessment tools are in the form of MCQs. Further, the integrated MCQ items are insufficient.	- Four workshops on “Assessment” were conducted by the University of

5. Faculty members are not well trained in writing case-based and integrated items, and in conducting OSCE.	Illinois at Chicago. - Two orientation sessions on enhancing integration in the design and assessment of courses were conducted for faculty members.- An international training workshop entitled "Training of the Clinical Examiners" was held at the FOM. - Workshops on assessment were delivered by qualified members in the Department of Medical Education to improve standardization of assessment and prepare faculties to join international programs such as FAIMER.
6. The frequency and way of conducting formative assessment and feedback was found to be inadequate.	Two workshops on formative assessment and constructive feedback were conducted by the Department of Medical Education for both faculty members and residents.
7. Inadequate alumni information and services at the FOM	An alumni office under the supervision of the VDCA was established. Data on the alumni over the preceding 15 years were collected and posted on the website of the FOM.
8. The level of integration needs to be higher on the integration ladder	Increase the level of the integration within the curriculum. A proposal has been prepared by the Departmetn of Medical Education not only to fully implement the designed hybrid system based integrated curriculum but also to be transmitted from the multidisciplinary to interdisciplinary step on the integration ladder. Implementation of this proposed plan has been started this year (2010-2011) as a pilot project in the cardio-vascular module.

III. MEDICAL STUDENTS

Points of Strength

1. The FOM has an admission process with clear publicized admission and selection criteria.
2. The available educational resources are compatible with the number of students enrolled. This compatibility is planned for in advance considering the anticipated increase in the number of enrolled students.
3. Setting the maximum number of selected students to be not more than 400 students to match the available resources allows optimal utilization of resources.
4. The FOM has an approved student support system at the University level through the General Student Counseling Unit, at the Faculty level via the Student Support Unit (SSU), and at the individual faculty member level.
5. The FOM standards and procedures for student evaluation, advancement, graduation, disciplinary action, dismissal, and appeal are clear.

6. Recreational facilities are available for both male and female students	
Areas that need improvement	**Intended Action/ Action Taken**
1. Lack of interviews to assess non-cognitive and non-academic skills of students enrolled into the FOM since 2004.	The FOM has requested from the President of the University his approval for reinstating a structured interview (in the form of mini multiple interviews) of the students who have been automatically selected by the computer system to further test the non-cognitive skills with a psychometric analysis designed by experts in this field used. This request was approved by the president to be started the next academic year 2011/2012.
2. The FOM standards and procedures for student evaluation, advancement, graduation, disciplinary action, dismissal, and appeal, albeit clear, need to be more publicized to students, faculty members, and administration members.	-The QAAU and SSU are currently formulating a draft for policies and procedures to deal with mistreatment cases. - Dissemination of policies and procedures on student evaluation, advancement, graduation, disciplinary action, dismissal, and appeal to students and faculty members by posting them on the FOM website, and the use of focus groups, departmental meetings, and memos.
IV. FACULTY	
Points of Strength	
1. The size and composition of faculty members are appropriate for the educational and other missions of the FOM.	
2. The FOM assents to the recruitment of faculty members according to departmental needs set every 5 years.	
3. The FOM enlightened by its first strategic plan that ends in 2012 and the university's strategic objectives, established an international partnership with Harvard School Medicine to initiate a Clinical Research Support Unit. and the FOM also revised allresearch infrastructure and resources to optimally use them in implementing its second strategic plan from 2013-2017.	
3. The Faculty and the university secure intramural and extramural research resources to ensure an optimal research environment.	
4. There are widely disseminated rules and regulations that govern faculty members' appointment, renewal, promotion, granting of tenure, and disciplinary actions. Faculty members are aware of the rules that regulate their responsibilities in teaching and its value in deciding their promotion.	
5. Formal and informal feedback about faculty members' performance and its role in their progress toward promotion is practised.	
6. There is an approved code for faculty conflict of interest and which is sent to all departments to be accessible to all faculty members.	
7. The main committees in the FOM have representatives of the faculty members who actively participate in the committees' decision- making/taking according to the authorization of the committee.	
Areas that need improvement	**Intended Action/ Action Taken**
1. Triangulation of data sources evaluating the teaching and	A format is designed by the QAAU

evaluation skills of faculty members is required.	for evaluation of the faculty members by the chairmen of the departments, vice deans, or peers. It is pending to be implemented after approval by the MCC. This could then be used for designing the training packages for faculty development.

V. EDUCATIONAL RESOURCES

Points of Strength

1. The FOM has adequate financial resources that enable it to accomplish its objectives efficiently and effectively.
2. The FOM complies with the actual needs for educational, research and community services, allocating its annual budget in a way that secures the establishment of its mission and strategic objectives.
3. The FOM has adequate facilities for teaching, research, and service activities. The space and design of facilities are appropriate to the nature of the school's activities and in proportion to the number of students.
4. The FOM has security and safety systems and methods in its buildings displayed in emergency exits as well asguidelines charts and signs.
5. Affiliation agreements with affiliate hospitals are explicit on the role of and expectations of medical students.
6. The FOM has control and authority over the educational program ensuring quantitative adequacy of the defined patient mix, number of beds, and length of stay.
7. Evaluation of rotations in affiliate hospitals is regularly conducted to identify and solve any problems to avoid any negative impact on the medical student teaching program.
8. Library resources are accessible to students and faculty members off-site and through a wireless access in the campus.
9. The quality of the library's automated database and bibliographic search, computer, and audiovisual capabilities is satisfactory.
10. The library assists in achieving the educational program objectives in cultivating self-learning behavior.

Areas that need improvement	**Intended Action/ Action Taken**
1. The number of qualified librarians and IT personnel is insufficient.	Recruitment of qualified personnel in the library and IT service
2. Suboptimal awareness of students and faculty members on the rich electronic database available in the library which can be accessed from home or through any internet access using user ID and password.	Training workshops are held by the Deanship of Libraries Affairs for increasing the awareness and skills on using the rich electronic database.

Membership of the Self-Study Task Force (Main Accreidtation Committee)

	Name	Academic Position	Department
1.	Prof. Tariq Ahmed Madani (Chairman)	Professor	Medicine
2.	Dr. Basem Salama El-Deek (Co-Chairman)	Associate Professor	Medical Education
3.	Dr. Adnan Abullah Al Mazroa (former Dean of FOMcurrently the Vice President of the University)	Associate Professor	Anesthesia
4.	Prof. Mahmoud Shaheen Al-Ahwal (Dean)	Professor	Medicine
5.	Prof. Daad Hasan Akbar (Vice Dean for female section)	Professor	Medicine
6.	Dr. Abdulaziz Mohammad Boker (former Vice Dean for Quality and Development)	Associate Professor	Anesthesia
7.	Dr. Abdulmonem Abdulsalam Al-Hayani (Vice Dean for Basic Sciences)	Associate Professor	Anatomy
8.	Dr. Khaled Ibrahim Al-Noory (former Vice Dean for Graduate Studies & Scientific Research)	Assistant Professor	Otorhinolarygology
9.	Dr. Saad Mohammed Salah Al-Mohayawi (Vice Dean for Graduate Studies & Scientific Research)	Assistant Professor	Otorhinolarygology
10.	Dr. Amro Al-Habeshi (Vice Dean for Quality and Development)	Assistant Professor	Orthopedic
11.	Prof. Mohammed Saleh Mohammed Ardawy	Professor	Clinical Biochemistry
12.	Prof. Hasan Ali Nasrat	Professor	Obstetrics and Gynecology
13.	Prof. Omaima Abo Al-Ela Hamed (Head of Quality & Accreidtation Unit)	Professor	Medical Education
14.	Dr. Hamed Abdul-Ra'oof Saleh	Associate Professor	Anatomy
15.	Dr. Fatin M. Al-Sayes	Associate Professor	Hematology
16.	Dr. Hanan Ahmed Al-Qady	Assistant Professor	Physiology
17.	Dr. Fayza Al Fayez	Assistant Professor	Clinical Biochemistry
18.	Dr. Azra Karmani	Assistant Professor	Physiology
19.	Dr. Hani Zakaria Asfour	Assistant Professor	Parasitology
20.	Dr. Nasra Naeem Ayoub	Assistant Professor	Anatomy
21.	Dr. Shagufta Taher Mofty	Assistant Professor	Pathology
22.	Dr. Mahdi Qadi	Assistant Professor	Family and Community Medicine
23.	Dr. Ayman Mohammed Ghanem	Lecturer	Pathology
24.	Mr. Hisham Abulnaja	Director of FOM Administration	
25.	Ms. Wesal Abulkhair	Leader of 5th year female medical Students	
26.	Mr. Hossam El-Bogamy	Leader of 5th year male medical student	
27.	Mr. Rani Al-Hassan Zarban	6th year student	

Membership of the Governance and Administration Committee

	Name	Academic Position	Department
1.	Prof. Daad Hasan Akbar (Vice Dean for female section and Chairman of the committee)	Professor	Medicine
2.	Dr. Mohammed Ahmed Hassanien (Co-Chairman)	Associate Professor	Medical Education
3.	Dr. Talal Mohammed Bakhsh (former Dean)	Professor	Surgery
4.	Prof. Magda Mohamed Hagras	Professor	Pharmacology
5.	Dr. Ghada Abdulhay Abdulhameed	Associate Professor	Anatomy
6.	Dr. Hanan Ali Amin Mostafa	Associate Professor	Anatomy
7.	Dr. Ghadeer Ahmed Mokhtar	Associate Professor	Pathology
8.	Ms. Maha Saleh Al-Siary	Secretary	Administration
9.	Mr. Ahmed Alselamy	5th year student	
10.	Ms. Suzan Badawood	4th year student	
11.	Mr. Mohannad Abdullateef Alzain	2nd year student	
12.	Ms. Hanan Alhazmy	2nd year student	

Membership of the Academic Environment Committee

	Name	Academic Position	Department
1.	Dr. Amro Al-Habeshi (Vice Dean for Quality and Development and Chairman of the committee)	Assistant Professor	Orthopedic
2.	Dr. Abdulaziz Mohammed Ali Boker (former Vice Dean for Quality and Development and former chairman of the committee)	Associate Professor	Anesthesia
3.	Prof. Omaima Aboul Ella Hamed Ali (Head of Quality & Accreidtation Unit and Co-Chairman of the committee)	Professor	Medical Education
4.	Dr. Khaled Ibrahim Al-Noori (former Vice Dean for Graduate Studies & Scientific Research)	Associate Professor	Otorhinolarygology
5.	Prof. Hasan Mohammad Ali Farsi (former Vice Dean for Clinical Affairs)	Professor	Urology
6.	Prof. Jamila Abdelaziz Qari	Professor	Pediatrics
7.	Prof. Maha Abdulqader Hijazy	Professor	Physiology
8.	Dr. Khaled Breik Alghamdi	Associate Professor	Otorhinolarygology
9.	Mr. Hani Abdullah Bostagi	Director of Dean Office	
10.	Dr. Abdulaziz Abdullah Baokbah	Lecturer	Clinical Skills Center
11.	Mr. Ibraheem Ahmed Aboushousha	6th year student	
12.	Ms. Dareen Abdulbaqy	5th year student	
13.	Ms. Sara Baghlaf	3rd year student	
14.	Mr. Mohammed Ibraheem Khoja	2nd year student	

Membership of the Educational Program Committee

	Name	Academic Position	Department
1.	Dr. Abdulmonem Al-Hayani (Vice Dean for Basic Sciences and Chairman of the committee)	Associate Professor	Anatomy
2.	Dr. Raid Mahmoud Hamdy Mansour (Co-Chairman)	Associate Professor	Anatomy
3.	Prof. Adel Abdel Rafee	Professor	Clinical Biochemistry
4.	Prof. Abdulmoniem Mahmoud Osman	Professor	Pharmacology
5.	Prof. Mohammed Ahmed Alharbi	Professor	Surgery
6.	Prof. Omaima Abo Al-Ela Hamed	Professor	Medical Education
7.	Dr. Abdullah Ahmed Alghamdi	Associate Professor	Microbiology
8.	Dr. Saad Abullah Al-Saedi	Associate Professor	Pediatrics
9.	Dr. Khidir Adam Abdul Galeel	Associate Professor	Physiology
10.	Dr. Osama Abdulaziz Mohamed Gaber	Associate Professor	Clinical Biochemistry
11.	Dr. Iman Hussein Abdulaal	Associate Professor	Anatomy
12.	Dr. Wafaa Saad El-Din Ramadan	Associate Professor	Anatomy
13.	Dr. Bassem Salama Eldeek	Associate Professor	Medical Education
14.	Dr. Mohammed Ahmed Hassanien	Assistant Professor	Medical Education
15.	Dr. Magdy Mohamed Omar El-Fark	Assistant Professor	Anatomy
16.	Dr. Abdulraheem Al-Shehri	Assistant Professor	Medicine
17.	Dr. Salwa Ibrahim Hindawi	Assistant Professor	Hematology
18.	Dr. Hayat Zakaria Abdulhameed Kamfar	Assistant Professor	Pediatrics
19.	Dr. Rana Yaqoub Bokhary	Assistant Professor	Pathology
20.	Dr. Nasra Naeim Ayoub	Assistant Professor	Medical Education
21.	Dr. Wafaa Adeeb Sait	Consultant - hospital post	Obstetrics and Gynecology
22.	Dr. Sherine Ibrahim Ahmed Salama	Lecturer	Pathology
23.	Dr. Ayman Mohamed Ghanem	Lecturer	Pathology
24.	Mr. Babiker Abdulrahman Yassin	Secretary	
25.	Mrs. Maha Saleh Al-Siary	Secretary	
26.	Mr. Mohannad Naser	4th year student	
27.	Mr. Mohammed Bokhary	4th year student	
28.	Mr. Anas Merdad	3rd year student	
29.	Ms. Dima Nizar Al-Sahly	6th year student	
30.	Ms. Nouf Al-said	4th year student	

Membership of the Medical Student Committee

	Name	Academic Position	Department
1.	Dr. Hani Zakaria Asfour (Chairman)	Assistant Professor	Parasitology
2.	Dr. Fatin M. Al-Sayes (Co-Chairman)	Associate Professor	Hematology
3.	Prof. Mohamad Salim Al-Hadramy	Professor	Medicine
4.	Prof. Abdel Rahman Fahmy Ahmed Saba	Professor	Physiology
5.	Dr. Basem Salama El-Deek (Co-Chairman)	Associate Professor	Medical Education
6.	Dr. Aisha Makram Siddiqe	Associate Professor	Medicine
7.	Dr. Faida Hasan Bamanie	Associate Professor	Clinical Biochemistry
8.	Dr. Jameel Abdulaziz Al-Ata	Associate Professor	Pediatircs
9.	Dr. Sawsan Mohammed Jalalah	Associate Professor	Pathology
10.	Dr. Eman Mohamed Sayed Emam	Associate Professor	Pathology
11.	Dr. Gamal Saeed Abdul Aziz	Associate Professor	Anatomy
12.	Dr. Shareef Mohamed Hassan	Associate Professor	Anatomy
13.	Dr. Su'ad Shaker Ali	Associate Professor	Anatomy
14.	Dr. Azra Kermani	Assistant Professor	Physiology
15.	Dr. Noura Abdullah Abdulrahman Kathlan	Assistant Professor	Pediatircs
16.	Dr. Hashim Rida Fida	Assistant Professor	Family and Community Medicine
17.	Dr. Nizar Mohamed Ali Hebshi	Assistant Professor	Ophthalmology
18.	Mr. Hani Abdullah Bostagi	Director of Dean Office	
19.	Mr. Hamad Ali Al-Harbi	Administration	
20.	Ms. Iman Khalawy	6th year student	
21.	Mr. Majed Alfy	5th year student	
22.	Mr. Ibraheem Khayyat	4th year student	
23.	Ms. Dareen Alshaer	3rd year student	

Membership of the Faculty Committee

	Name	Academic Position	Department
1.	Dr. Saad Mohammed Salah Al-Mohayawi (Vice Dean for Graduate Studies & Scientific Research and Chairman of the committee)	Assistant Professor	Otorhinolarygology
2.	Dr. Khaled Ibrahim Al-Noory (Co-Chairman)	Associate Professor	Otorhinolarygology
3.	Prof. Fadwa Gameel Altaf	Professor	Pathology
4.	Dr. Basem Salama El-Deek (Co-Chairman)	Associate Professor	Medical Education
5.	Dr. Abdullah Mohammed Ahmed Kaaki	Associate Professor	Anesthesia
6.	Dr. Mohammed Hasan Qari	Associate Professor	Hematology
7.	Dr. Nasra Naeem Ayoub	Assistant Professor	Anatomy
8.	Dr. Hanan Ahmed Al-Qady	Assistant Professor	Physiology
9.	Dr. Sameer Khedr Zimo	Assistant Professor	Medicine/ Dermatology
10.	Dr. Saad Abdullah Waheeb	Associate Professor	Ophthalmology
11.	Dr. Jomana Adeeb Al-A'ma	Assistant Professor	Genetics
12.	Dr. Nesma Mohammed Mansoury	Assistant Professor	Obstetrics and Gynecology
13.	Dr. Nawal Salem Ahmed Al-Sanany	Assistant Professor	Obstetrics and Gynecology
14.	Dr. Eskandar Solaiman Al-Qothamy	Assistant Professor	Surgery
15.	Dr. Bassam Mohammed Addas	Assistant Professor	Surgery
16.	Dr. Rima Samy Badr	Assistant Professor	Pediatrics
17.	Dr. Awatef Gamal	Associate Professor	Pathology
18.	Dr. Mahdi Qadi	Assistant Professor	Family and Community Medicine
19.	Mr. Sharaf Bati Al-Zaydi	Administration	

Membership of the Educational Resources Committee

	Name	Academic Position	Department
1.	Prof. Hasan Al-Zahrani (Vice Dean for Clinical Affairs and Chairman of the committee)	Professor	Surgery
2.	Dr. Salem Bazaraah (Co-Chairman)	Assistant professor	Medicine
3.	Dr. Hamed Habib (Vice Dean Hospital Director)	Associate Professor	Pediatrics
4.	Dr. Mohammed Hasanain	Associate Professor	Medical Education
5.	Dr. Abdulmoein Al-Agha	Assistant professor	Pediatric
6.	Prof. Omaima Abo Al-Ela Hamed	Professor	Medical Education
7.	Prof. Aisha Al-Ghamdi	Professor	Medicine
8.	Prof. Jouda Maghrabi	Professor	Pathology
9.	Prof. Mahmoud Fouad	Professor	Parasitology
10.	Dr. Hisham B. Alem	Associate Professor	Otorhinolarygology
11.	Dr. Ali Sawan	Associate Professor	Pathology
12.	Dr. Maimoona Mushtaq	Associate Professor	Medicine
13.	Dr. Osama Nasif	Associate Professor	Pathology
14.	Dr. Galila Zaher	Assistant professor	Hematology
15.	Dr. Amal Bukhari	Assistant professor	Ophthalmology
16.	Mr. Hisham K. Abulnaja	Administrator	Administration
17.	Mr. Abdullah Al-Zahrani	Administrator	Education Affairs
18.	Mrs. Somaiah Abduwahab	Administrator	Clinical Skills Center
19.	Mrs. Khadija Ahmad Hasan	Secretary	Office of the Vice Dean for Clinical Affairs
20.	Mr. Baraa Mohammed Saeed Abduljawwad	6th year student	
21.	Ms. Aliaa Qaroot	5th year student	
22.	Mr. Ehab Monshy	3rd year student	
23.	Ms. Shaymaa Al-Sherif	2nd year student	

List of abbreviations	
ACLS	Advanced Cardiac Life Support
BLS	Basic Life Support
CACAMs	Committee on Accreditation of Canadian Medical Schools
CEOR	Center of Excellence for Osteoporosis Research
CTLD	Center for Teaching, Learning, and Development
CSC	Clinical Skill Center
CMC	Curriculum Monitoring Committee
CME	Continuous Medical Education
CV	Curriculum Vitae
ECECS	Early Clinical Experience and Communication Skills
EMES Med	E-Learning Management Electronic System in Medicine
EBM	Evidence-Based Medicine
FAIMER	The Foundation for Advancement of International Medical Education and Research
GCC	Gulf Council countries
ISI	Institute for Scientific Information
ICU	Intensive Care Unit
FOM-KAU	Faculty of Medicine at King Abelulaziz University
KAUH	King Abelulaziz University Hospital
KSA	Kingdom of Saudi Arabia
MBBS	Bachelor of Medicine and Bachelor of Surgery
LCME	Liaison Committee on Medical Education
MCC	Main Curriculum Committee
MCQs	Multiple Choice Questions
NCAAA	National Commission for Academic Accreditation and Assessment
NOGs	Non-Governmental Organization
ODUS	On Demand University Services
OSCE	Objective Structured Clinical Examination
OSPE	Objective Structured Practical Examination
PhD	Philosophiae doctor (Doctor of Philosophy)
PBL	Problem-Based Learning
PubMed	A service of the U.S. National Library of Medicine, National institute of Health, that includes over 19 million citations from MEDLINE and other life science journals
QAAU	Quality and Academic Accreditation Unit
QAA	Quality Assurance Agency
SCHS	Saudi Commission for Health Specialties
SSU	Student Support Unit
SDL	Self-Directed Learning
SWOT	Strengths, Weakness, Opportunities, and Threats

T/L	Teaching/Learning
FOM	Faculty of Medicine
ILOs	Intended Learning Outcomes
VDBS	Vice Dean for Basic Science
VDCA	Vice Dean for Clinical Affairs
VDFS	Vice Dean for Female Section
VDGSSR	Vice Dean for Graduate Studies and Scientific Research
VDQD	Vice Dean for Quality and Development